TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

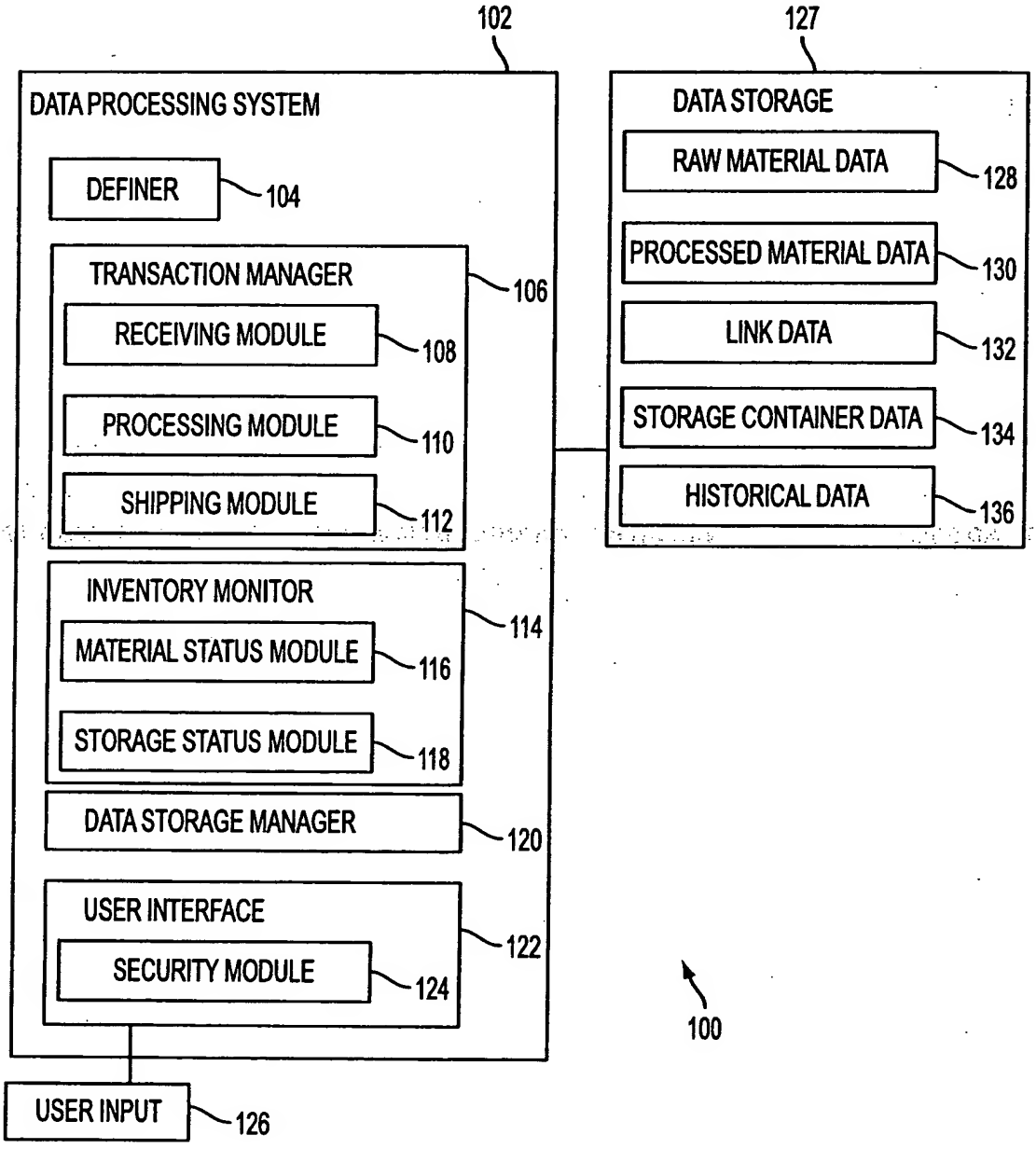

FIG. 1

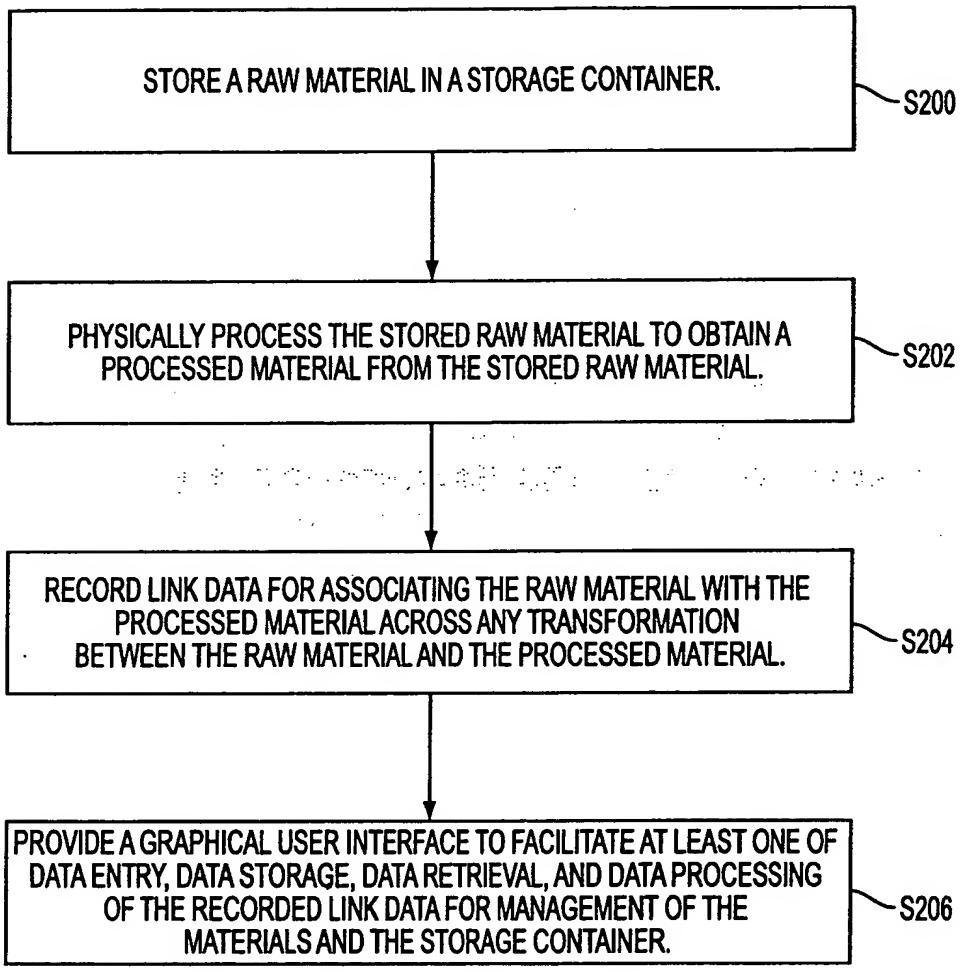
STORE A RAW MATERIAL IN A STORAGE CONTAINER.
S200
PHYSICALLY PROCESS THE STORED RAW MATERIAL TO OBTAIN A PROCESSED MATERIAL FROM THE STORED RAW MATERIAL.
S202
RECORD LINK DATA FOR ASSOCIATING THE RAW MATERIAL WITH THE PROCESSED MATERIAL ACROSS ANY TRANSFORMATION BETWEEN THE RAW MATERIAL AND THE PROCESSED MATERIAL.
S204
PROVIDE A GRAPHICAL USER INTERFACE TO FACILITATE AT LEAST ONE OF DATA ENTRY, DATA STORAGE, DATA RETRIEVAL, AND DATA PROCESSING OF THE RECORDED LINK DATA FOR MANAGEMENT OF THE MATERIALS AND THE STORAGE CONTAINER.
S206

FIG. 2

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF
THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

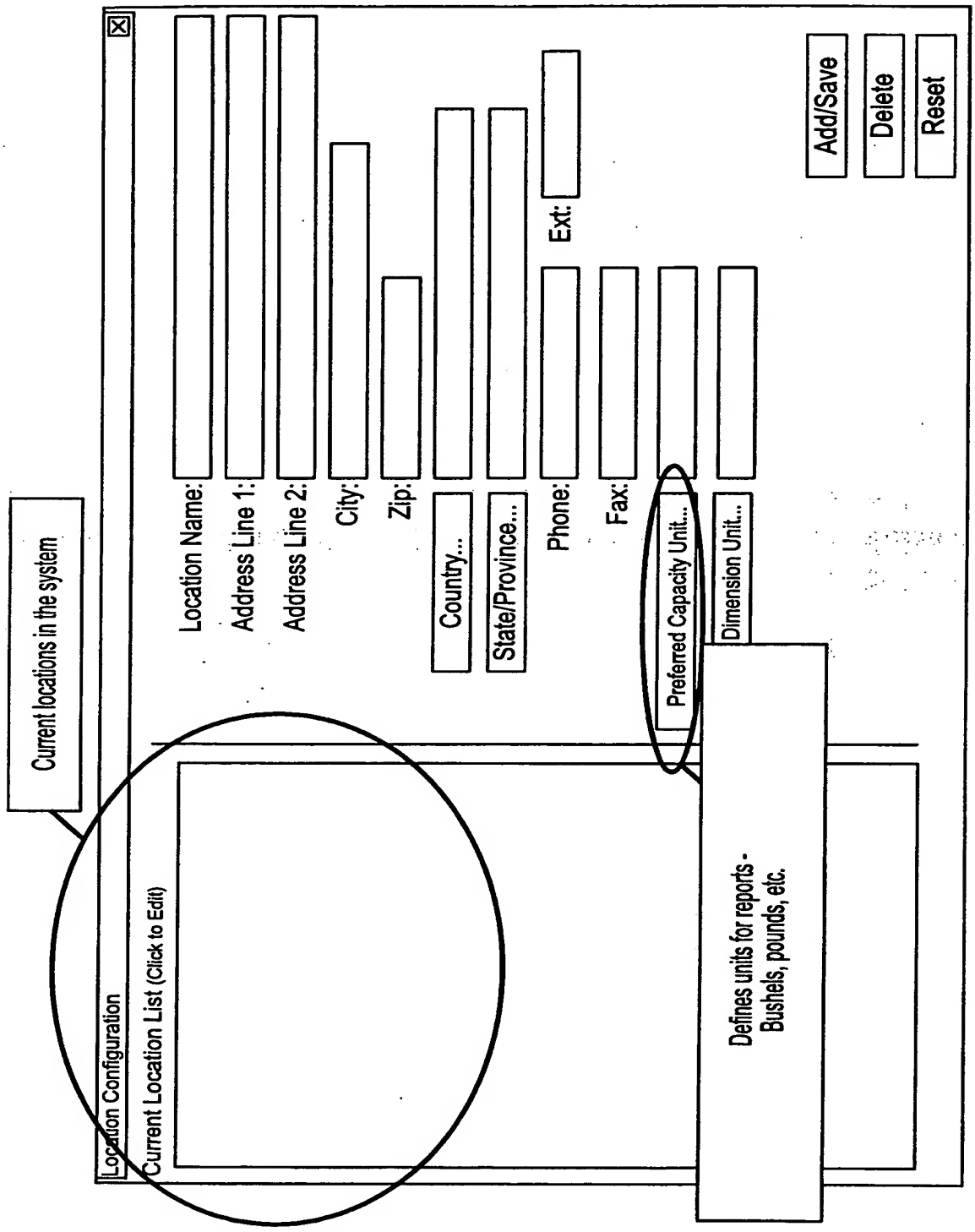

FIG. 3

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

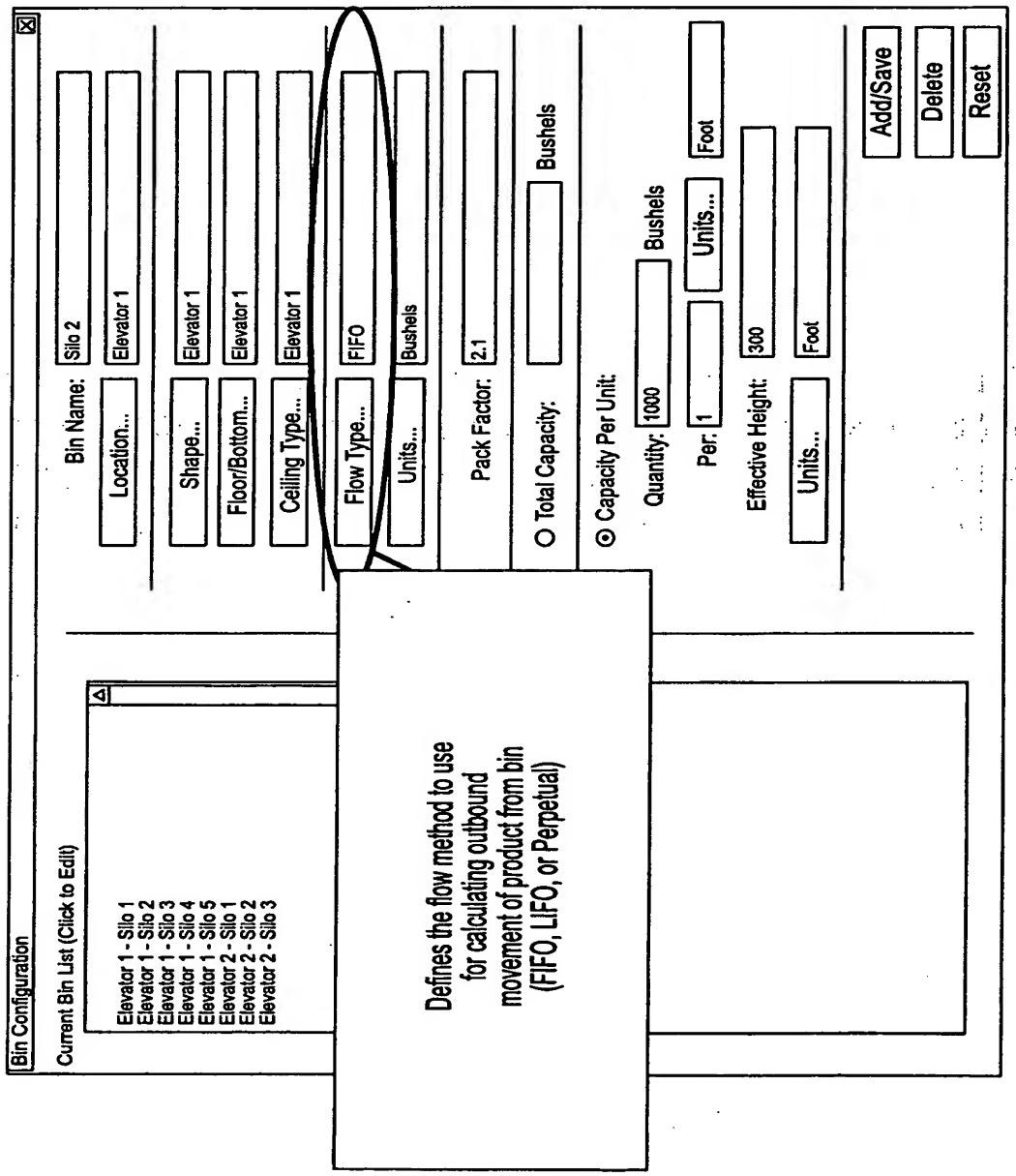

FIG. 4

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb. mah

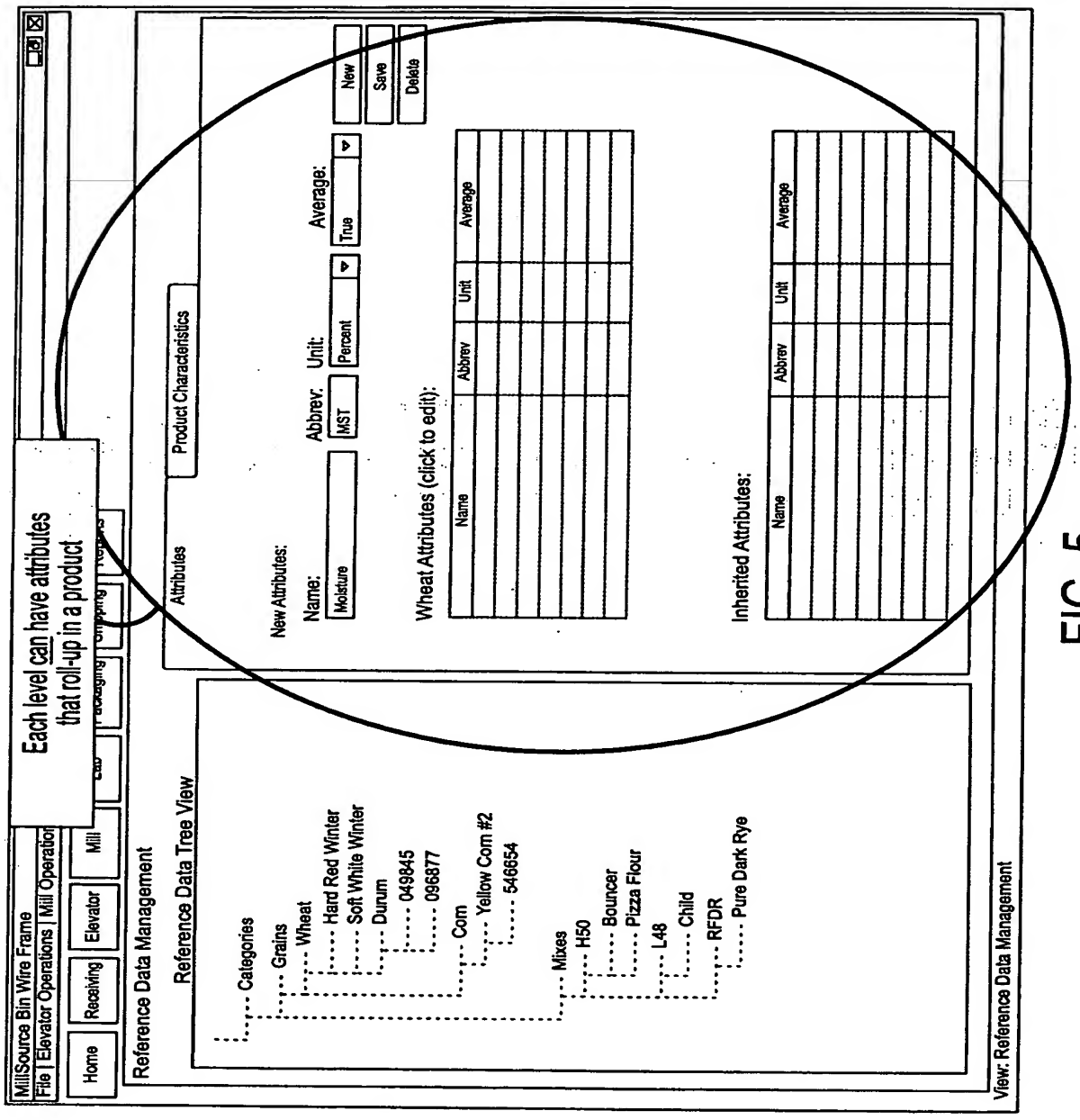

FIG. 5

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

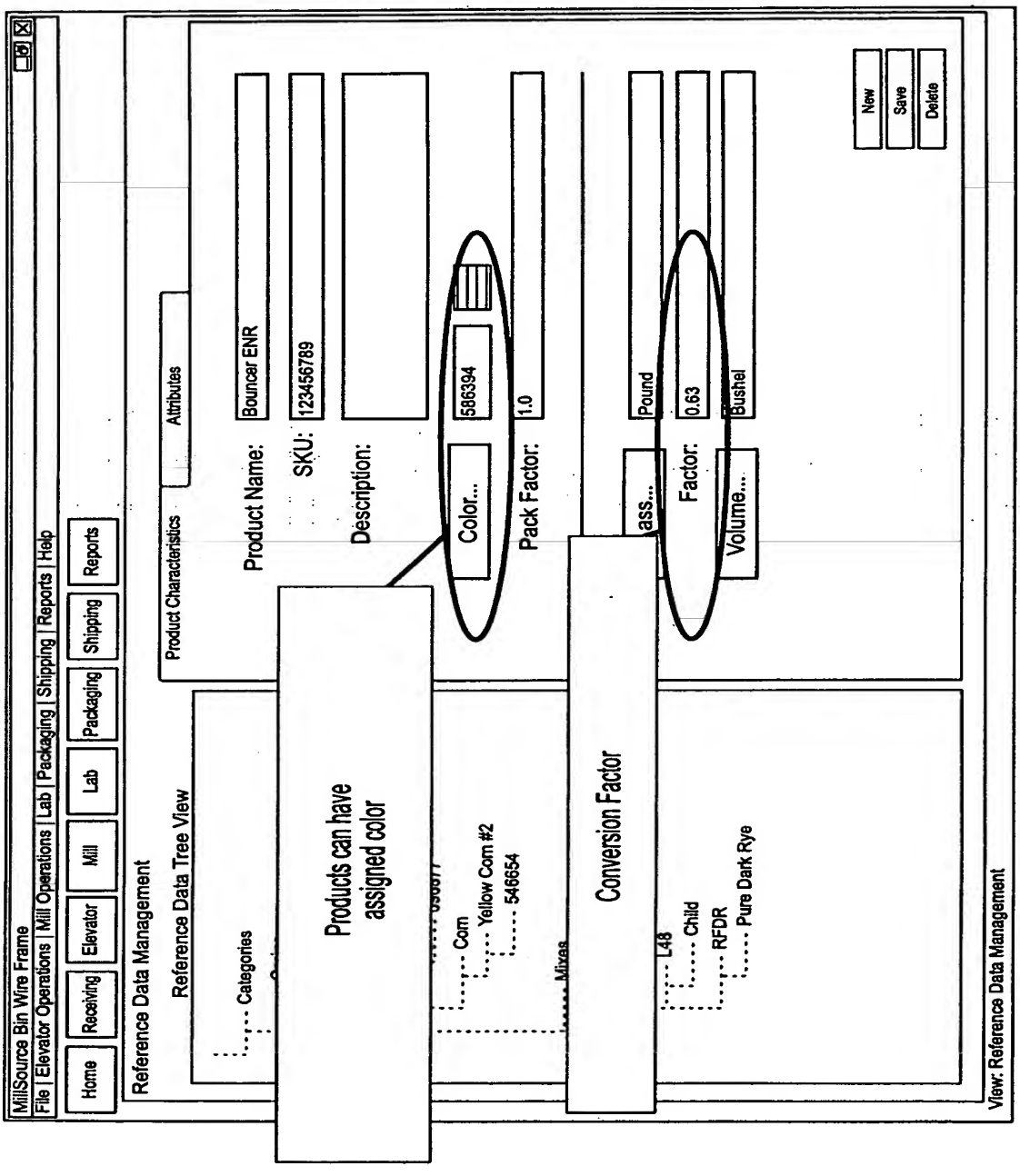

FIG. 6

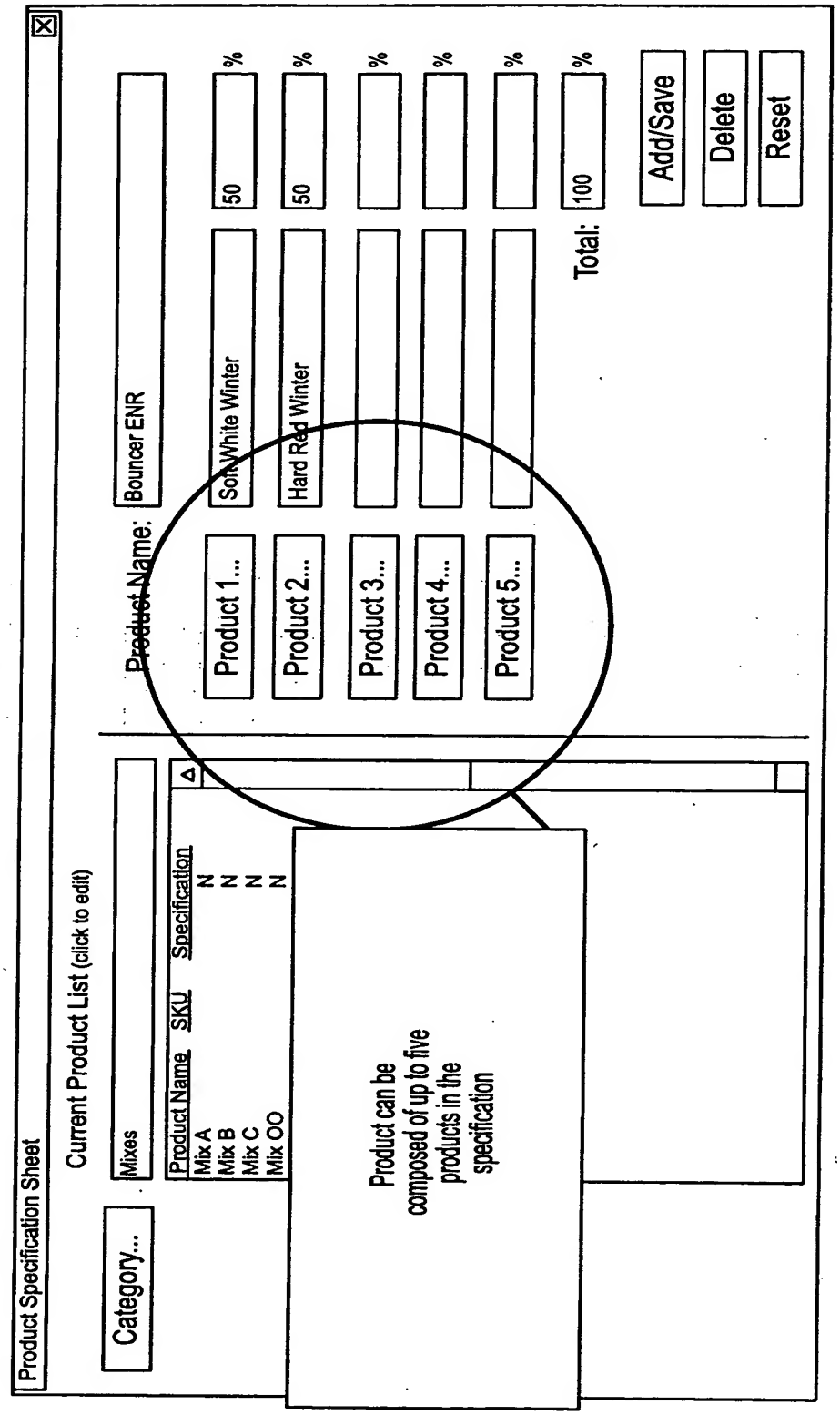
Product Specification Sheet
Current Product List (click to edit)
Category...
Mixes
Product Name SKU Specification
Mix A N
Mix B N
Mix C N
Mix OO N
Product can be composed of up to five products in the specification
Product Name:
Bouncer ENR
Soft White Winter
Hard Red Winter
Product 1...
Product 2...
Product 3...
Product 4...
Product 5...
50
50
100
Total:
%
Add/Save
Delete
Reset

FIG. 7

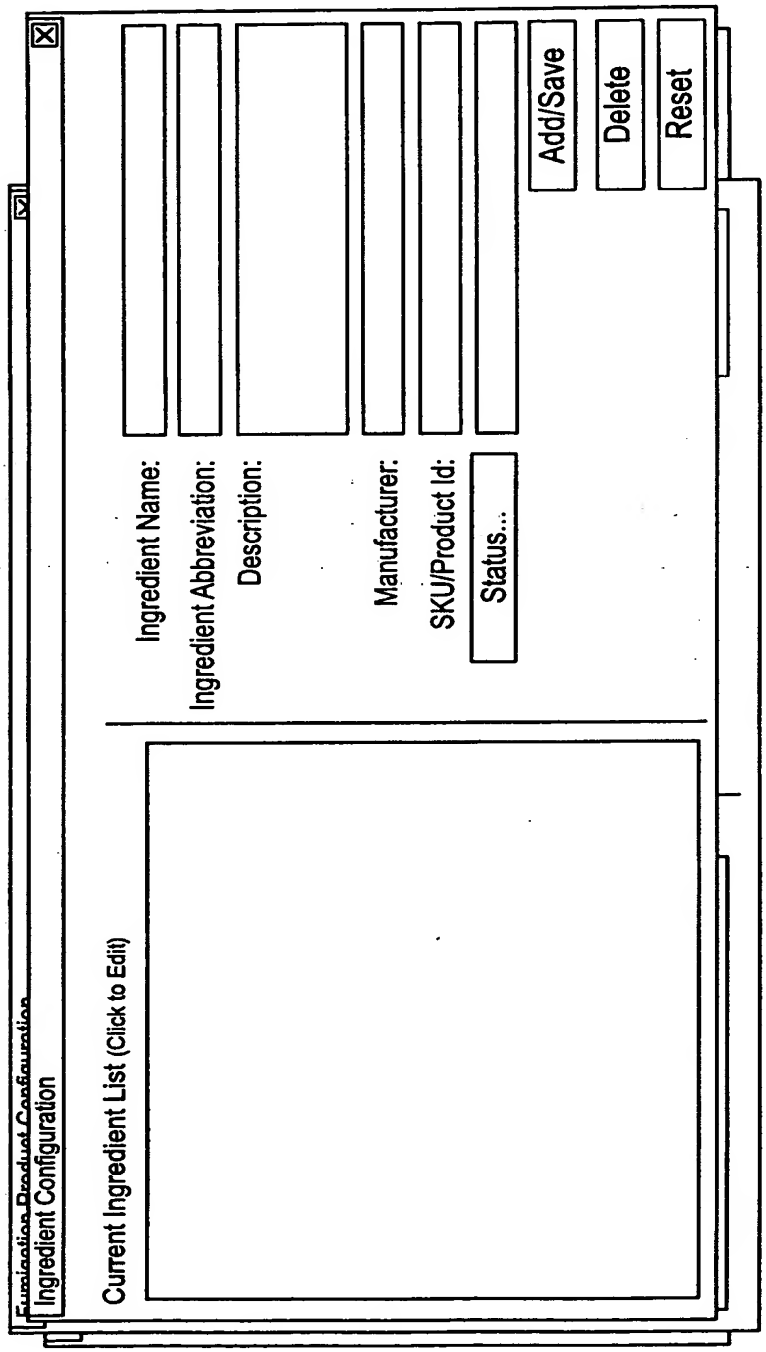
Fumigation Product Configuration
Ingredient Configuration
Current Ingredient List (Click to Edit)
Ingredient Name:
Ingredient Abbreviation:
Description:
Manufacturer:
SKU/Product Id:
Status...
Add/Save
Delete
Reset

FIG. 8

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

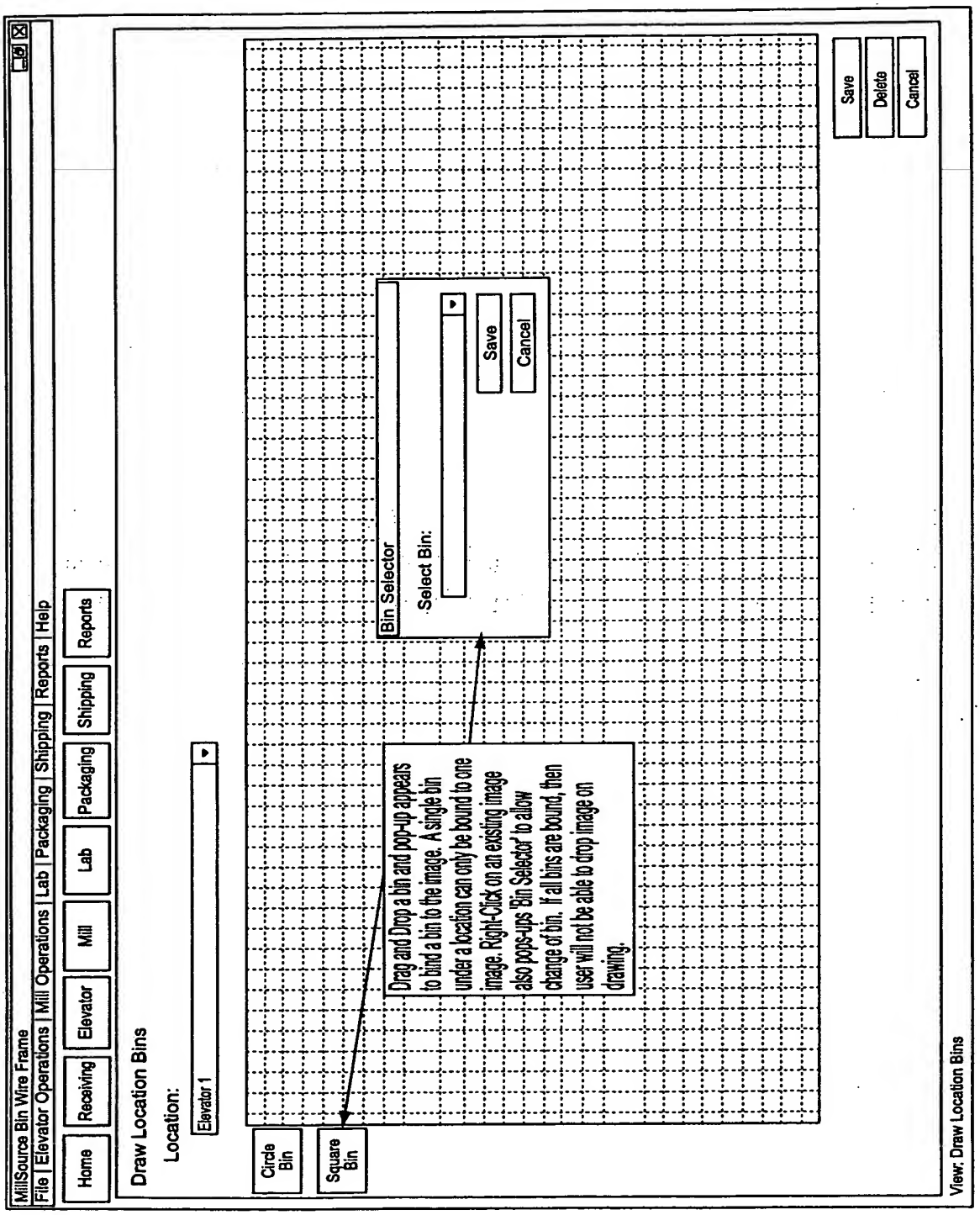

FIG. 9

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

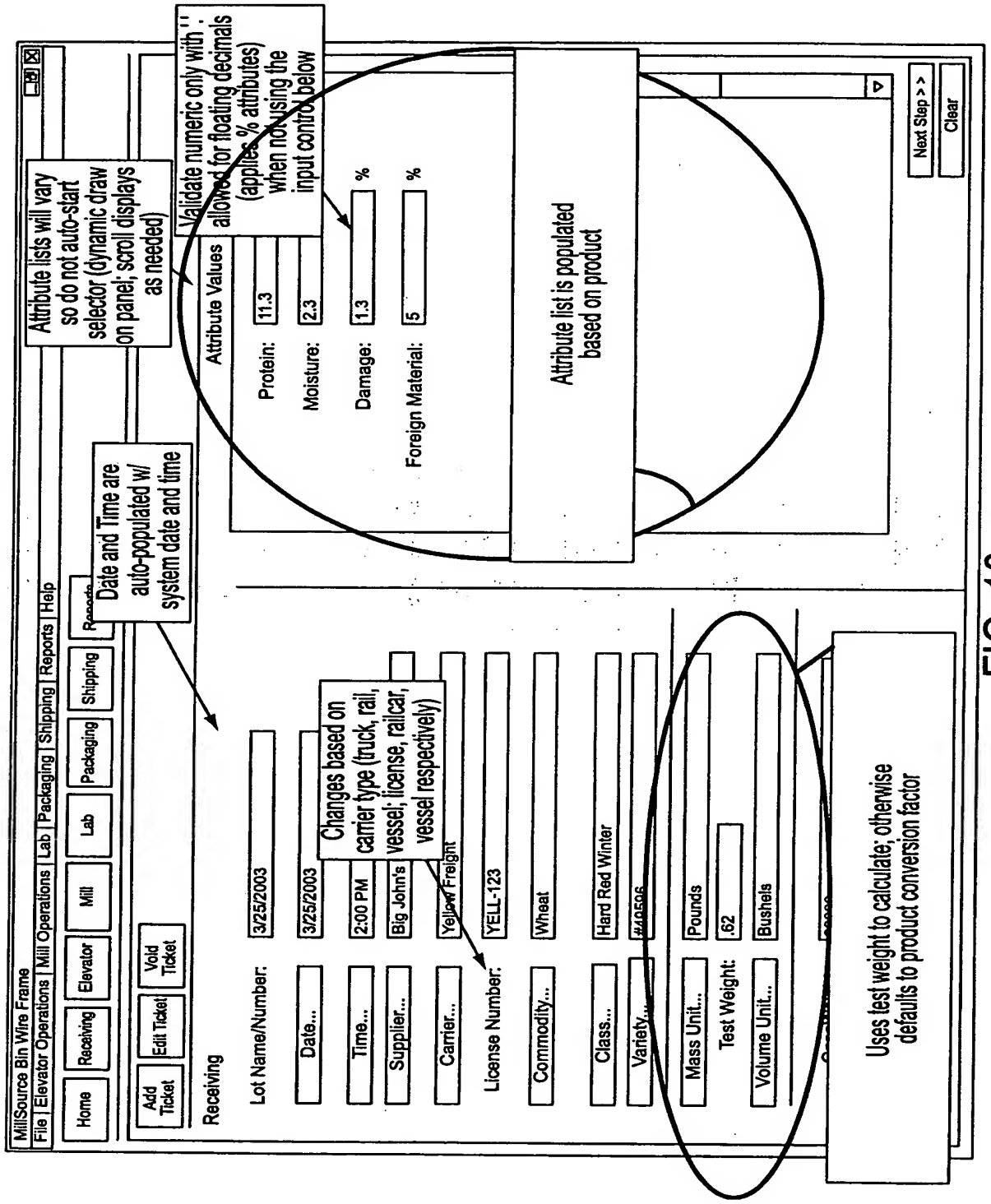

FIG. 10

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb. mah

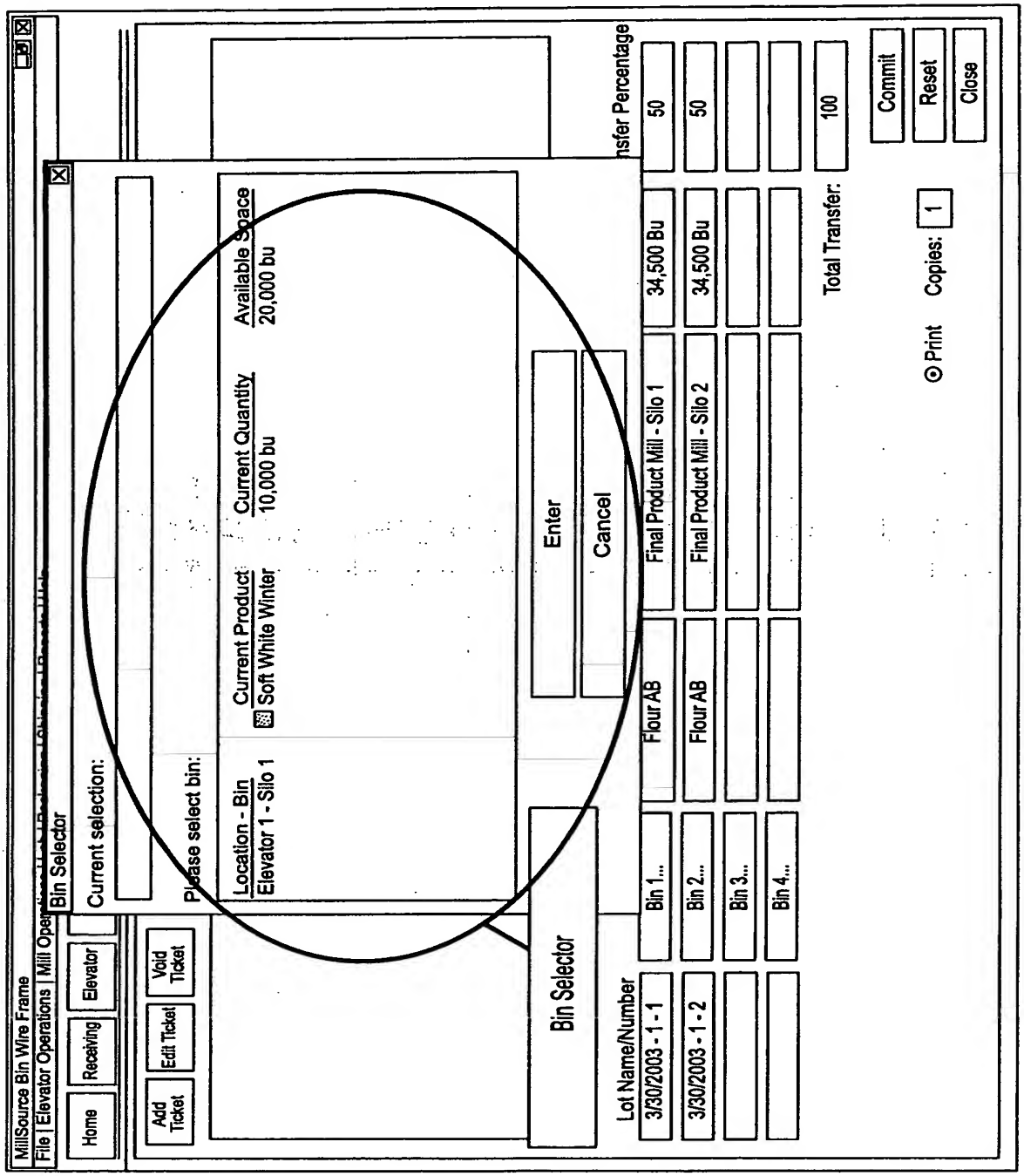

FIG. 11

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

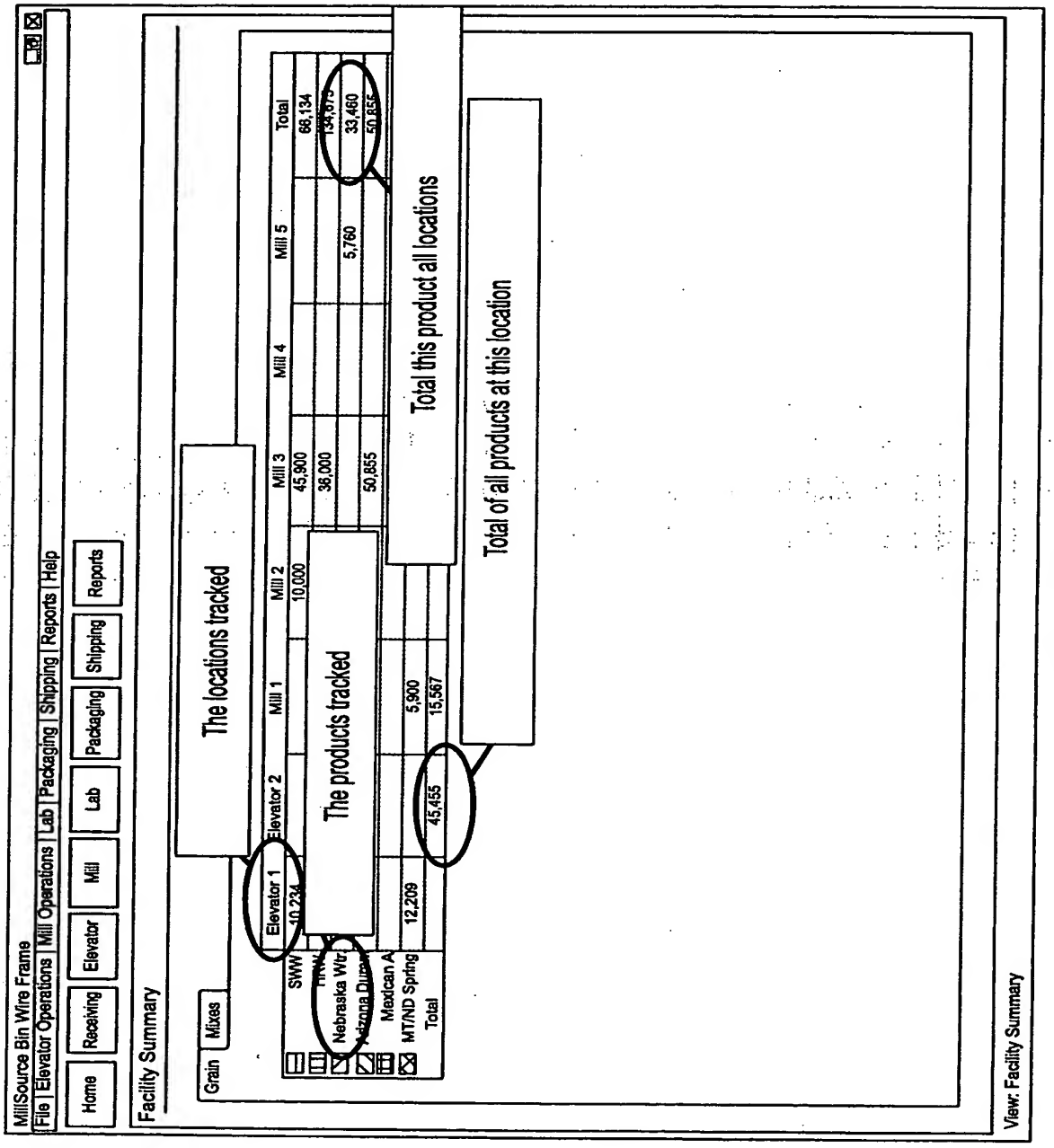

FIG. 12

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

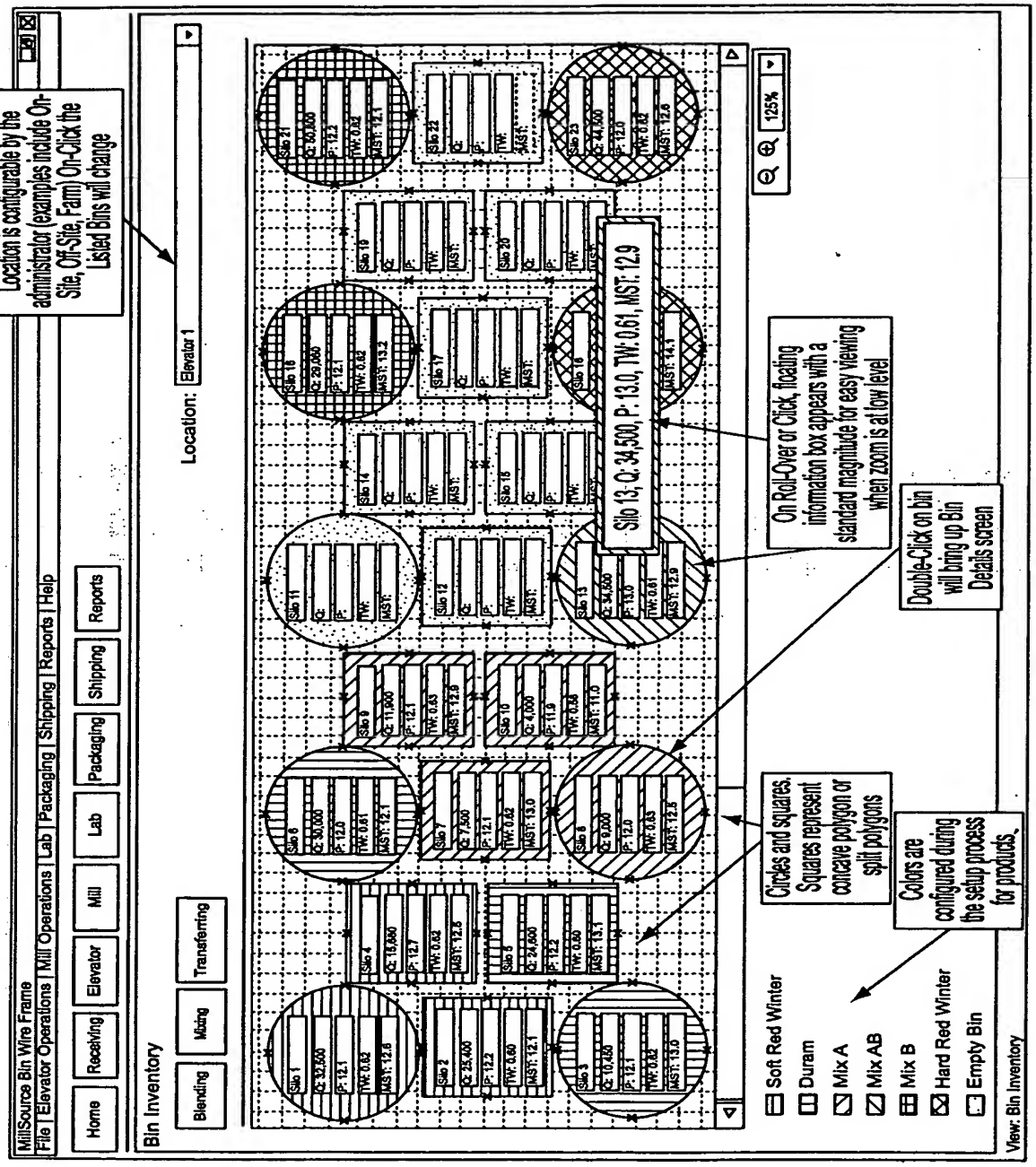

FIG. 13A

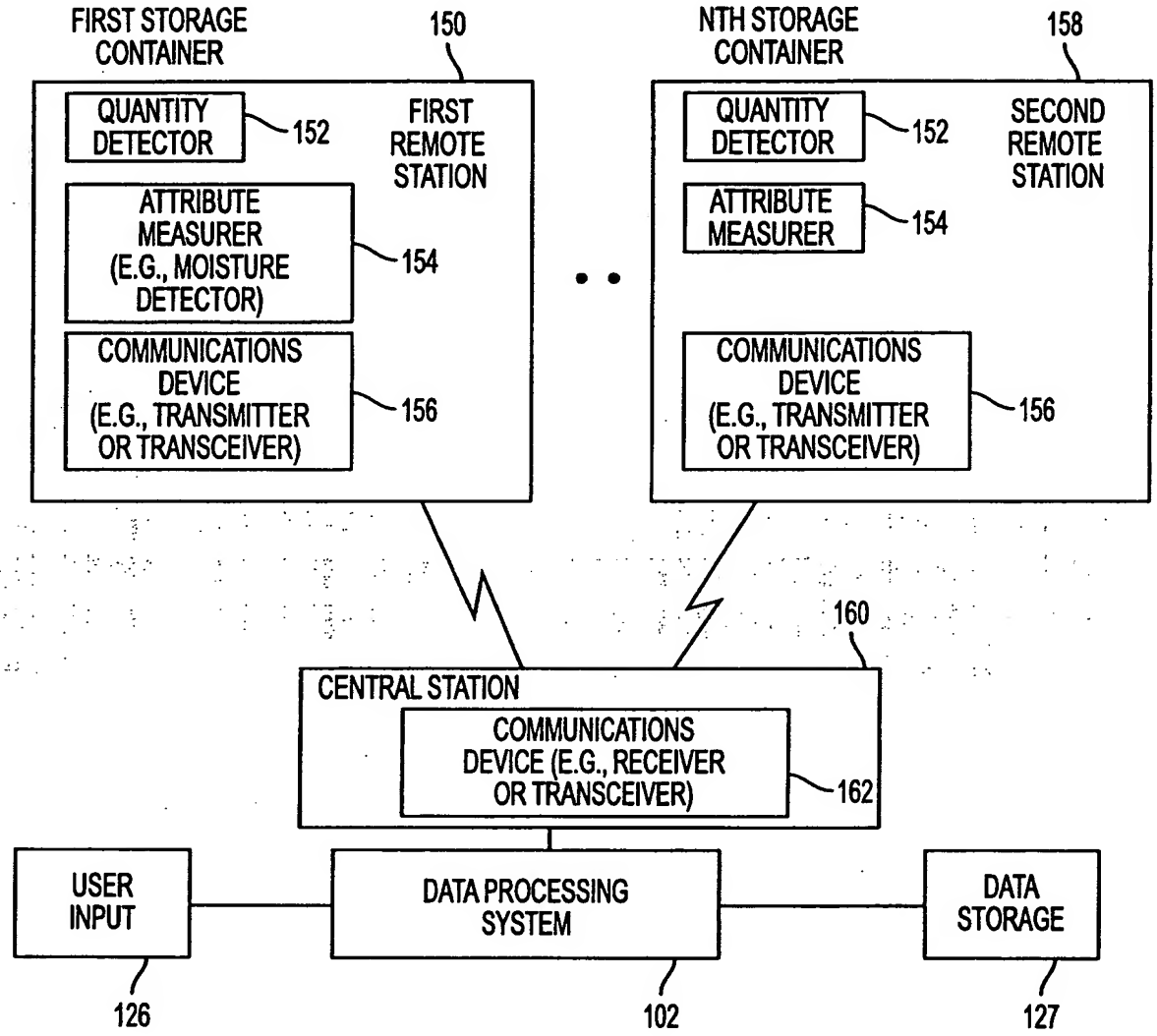
FIRST STORAGE CONTAINER
150
QUANTITY DETECTOR
152
FIRST REMOTE STATION
ATTRIBUTE MEASURER (E.G., MOISTURE DETECTOR)
154
COMMUNICATIONS DEVICE (E.G., TRANSMITTER OR TRANSCEIVER)
156
NTH STORAGE CONTAINER
158
QUANTITY DETECTOR
152
SECOND REMOTE STATION
ATTRIBUTE MEASURER
154
COMMUNICATIONS DEVICE (E.G., TRANSMITTER OR TRANSCEIVER)
156
160
CENTRAL STATION
COMMUNICATIONS DEVICE (E.G., RECEIVER OR TRANSCEIVER)
162
USER INPUT
126
DATA PROCESSING SYSTEM
102
DATA STORAGE
127

FIG. 13B

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

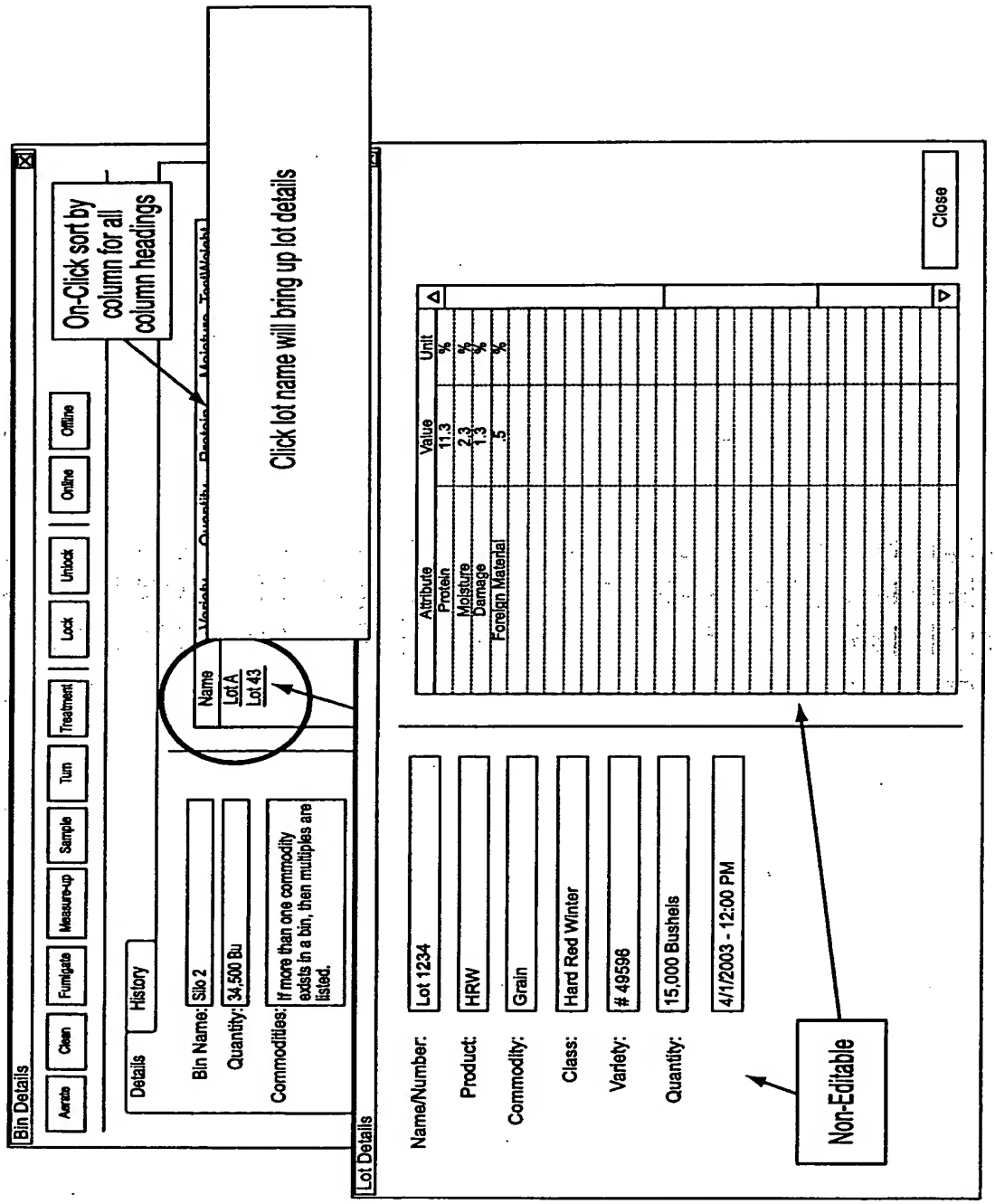

FIG. 14

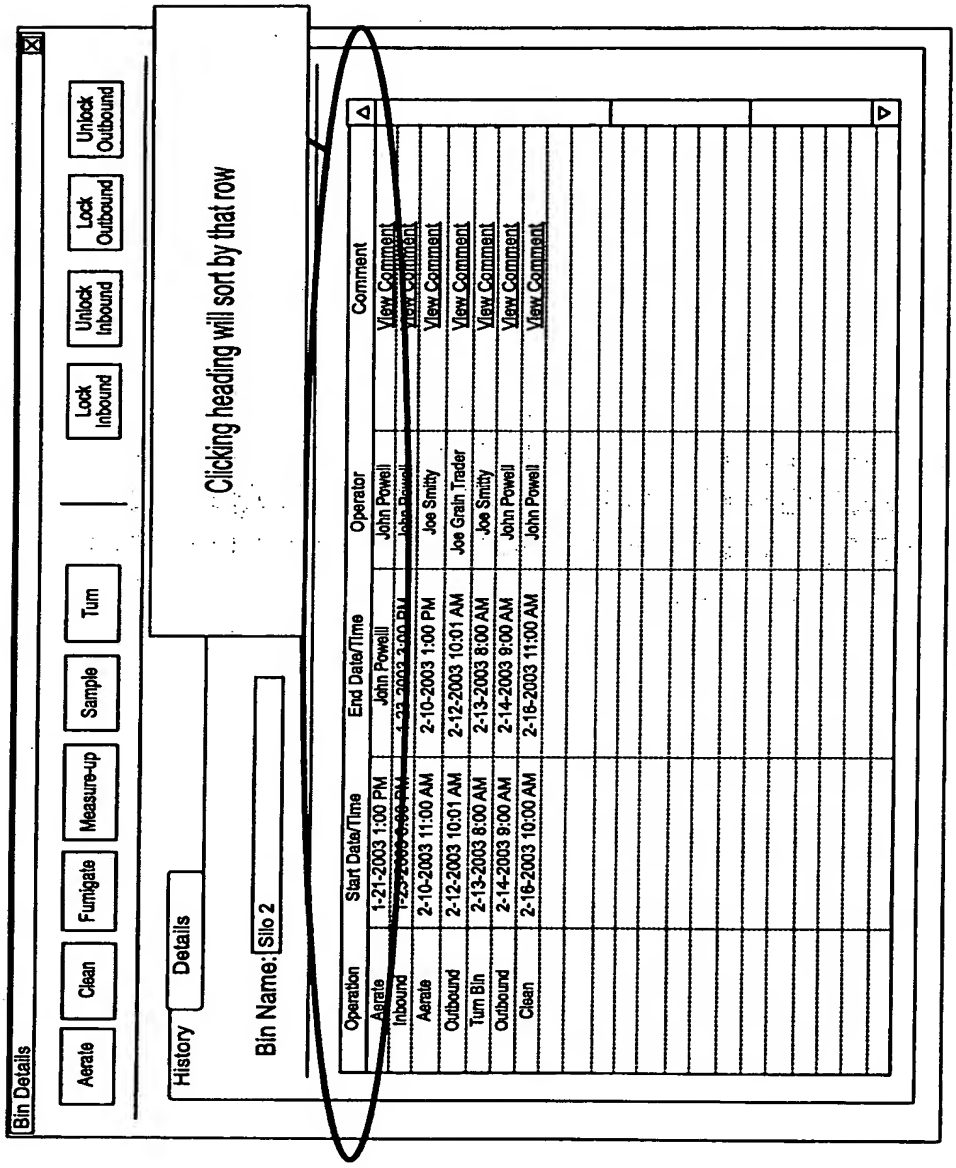
Bin Details
Aerate
Clean
Fumigate
Measure-up
Sample
Turn
Lock Inbound
Unlock Inbound
Lock Outbound
Unlock Outbound
History
Details
Bin Name: Silo 2
Clicking heading will sort by that row
Operation
Start Date/Time
End Date/Time
Operator
Comment
Aerate 1-21-2003 1:00 PM John Powell John Powell View Comment
Inbound View Comment
Aerate 2-10-2003 11:00 AM 2-10-2003 1:00 PM Joe Smitty View Comment
Outbound 2-12-2003 10:01 AM 2-12-2003 10:01 AM Joe Grain Trader View Comment
Turn Bin 2-13-2003 8:00 AM 2-13-2003 8:00 AM Joe Smitty View Comment
Outbound 2-14-2003 9:00 AM 2-14-2003 9:00 AM John Powell View Comment
Clean 2-16-2003 10:00 AM 2-16-2003 11:00 AM John Powell View Comment

FIG. 15

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

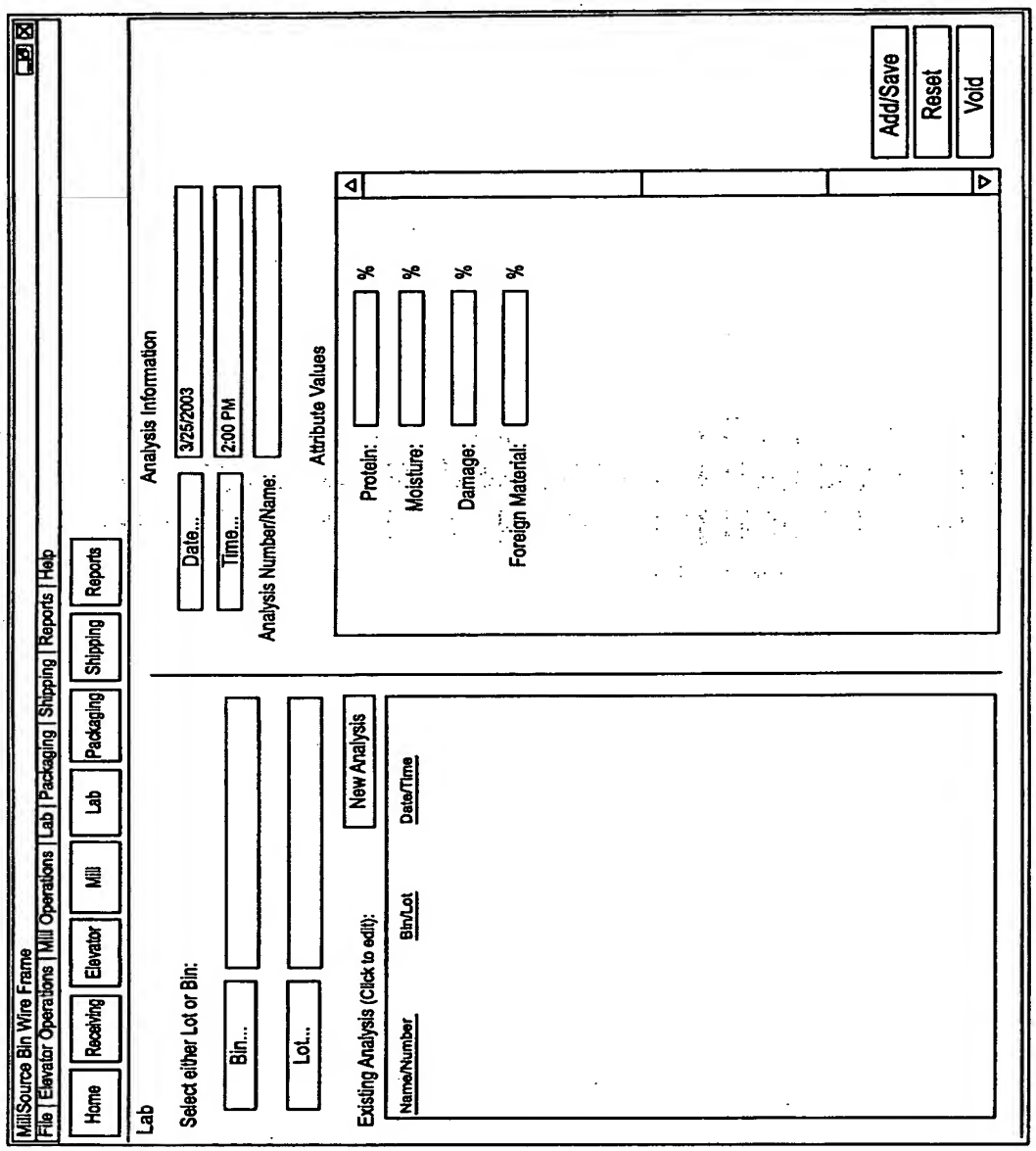

FIG. 16

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

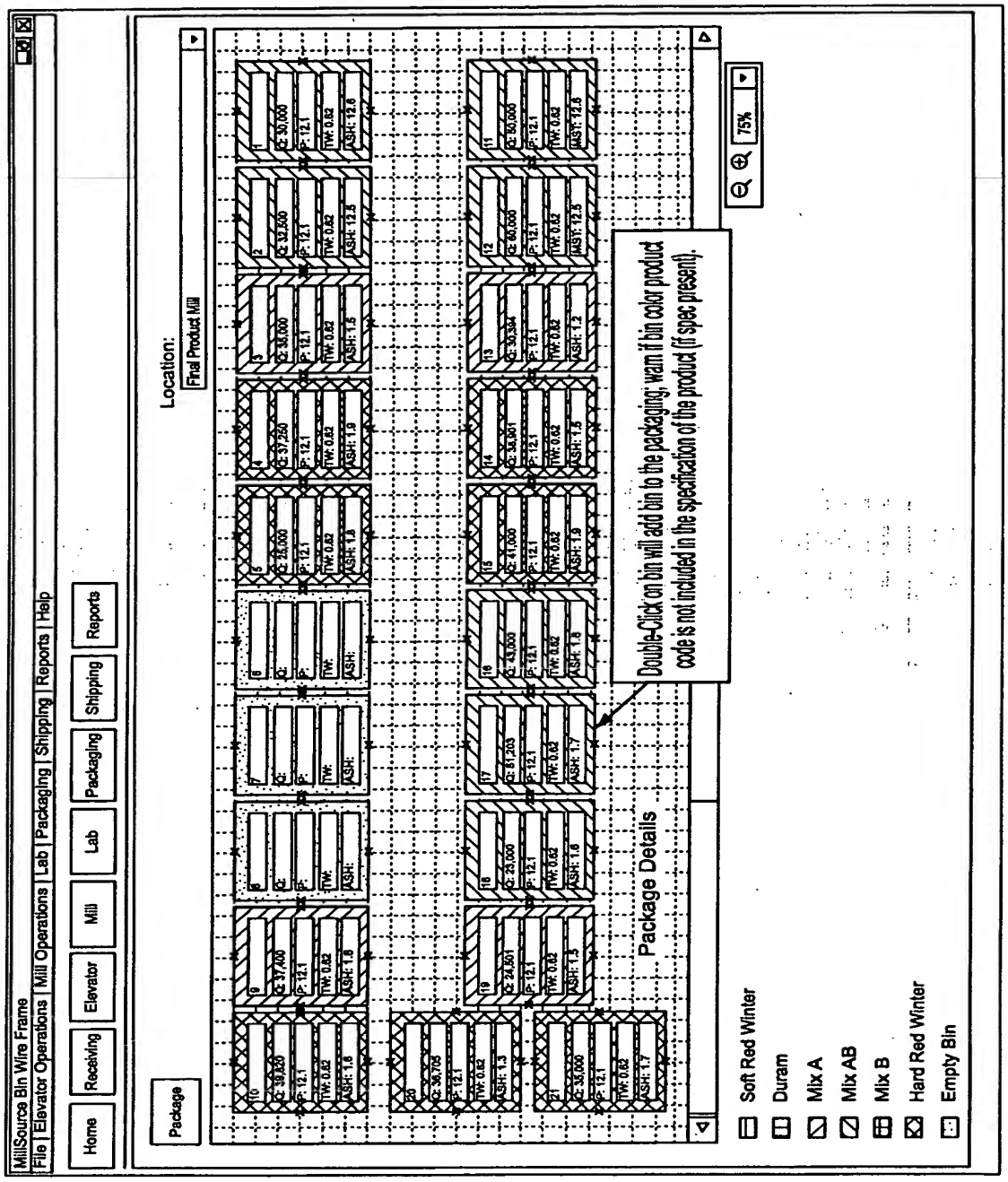

FIG. 17

Storage Summary
Bin Inventory
Selected Bin: All
Commodity: Hard Red Winter
Date: 9/9/2002 - 12/05/2002

Silo 1
Headquarters location
Lat/Long

Capacity	Current	Protein	Moisture	Last Add	Last Draw
150,000bu	98,088bu	13.3	12.0	12/01/2002	12/05/2002

Lot #	Date	Variety	Protein	Moisture	Test Wt.	FM	Quantity
4567	09/09/2002	HRW - Duram	13.2	12.1	61.1	1	5,144
4568	09/09/2002	HRW - Duram	13.3	11.8	61.0	2	5,255
4569	09/10/2002	HRW - Duram	13.5	12.0	60.4	1.3	6,123
4575	10/12/2002	HRW - Duram	13.5	12.0	60.2	1	5,100
4580	10/30/2002	HRW - Duram	13.3	12.0	61.0	2	5,315
4582	11/23/2002	HRW - Duram	13.4	12.2	60.5	2	5,533
4583	12/01/2002	HRW - Duram	13.3	12.1	60.0	1	5,500

Silo 2
Headquarters location
Lat/Long

Capacity	Current	Protein	Moisture	Last Add	Last Draw
100,000bu	75,050bu	14.0	11.5	11/01/2002	11/30/2002

Lot #	Date	Variety	Protein	Moisture	Test Wt.	FM	Quantity
6767	09/10/2002	HRW - Yuma	14.2	12.1	61.1	3	6,445
6768	09/10/2002	HRW - Yuma	13.8	11.3	61.0	3.6	4,355
6769	10/01/2002	HRW - Yuma	14.5	12.0	60.3	4	5,232

FIG. 18

Event Report
Selected Bin: Silo 1
Commodity: Hard Red Winter
Date: 11/01/2002 - 12/05/2002

Silo 1
Headquarters location
Lat/Long

SUMMARY

Capacity	Current	Protein	Moisture	Last Add	Last Draw
150,000bu	98,088bu	13.3	12.0	12/01/2002	12/05/2002

OPERATION / EVENT

Allocate Inbound
Create Lot: 4568
Operator: Joe Smith

Start Date/Time	Stop Date/Time	Variety	Protein	Moisture	Test Wt.	Quantity	Locked	Unlocked
11/09/2002 10:10am	11/09/2002 10:12am	HRW - Duram	14.2	12.1	61.1	5,122	N	Y

Aerate Bin
Lock Bin
Unlock Bin
Operator: John Doe

Start Date/Time	Stop Date/Time	Variety	Protein	Moisture	Test Wt.	Quantity	Locked	Unlocked
11/10/2002 03:30pm							Y	
	11/12/2002 08:00am							Y

FIG. 19

Supplier Report
Date: 1/01/2002 - 12/09/2002
Commodity: Hard Red Winter

Name	Quantity/bu
Joe Farmer RR2 Box 46 Anywhere, NE 68888 (402)333-3333	54,000
Dakota Farms Box 27 Anywhere, SD 69999 (999)999-9999	65,656
Country Elevators Box 98 Anywhere, SD 69999 (999)677-7777	98,095
Total Quantity:	217,751

FIG. 20

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb. mah

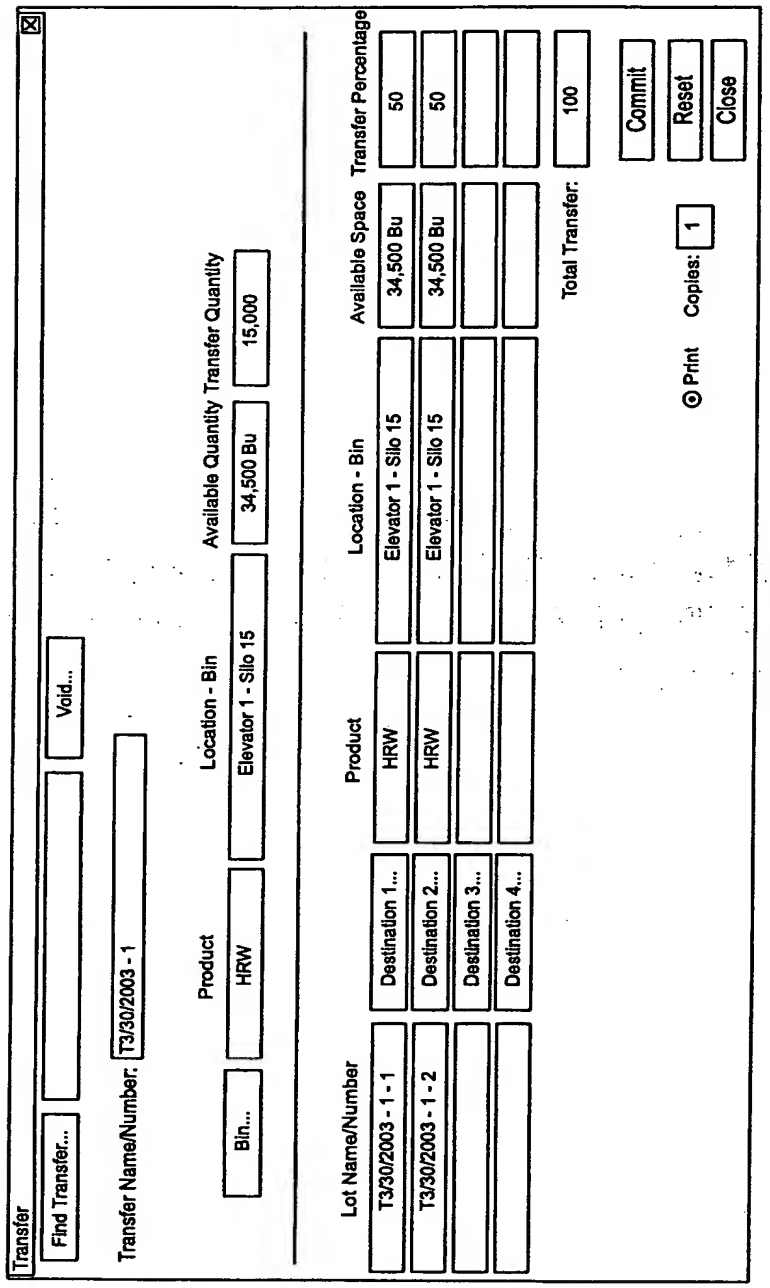

FIG. 21

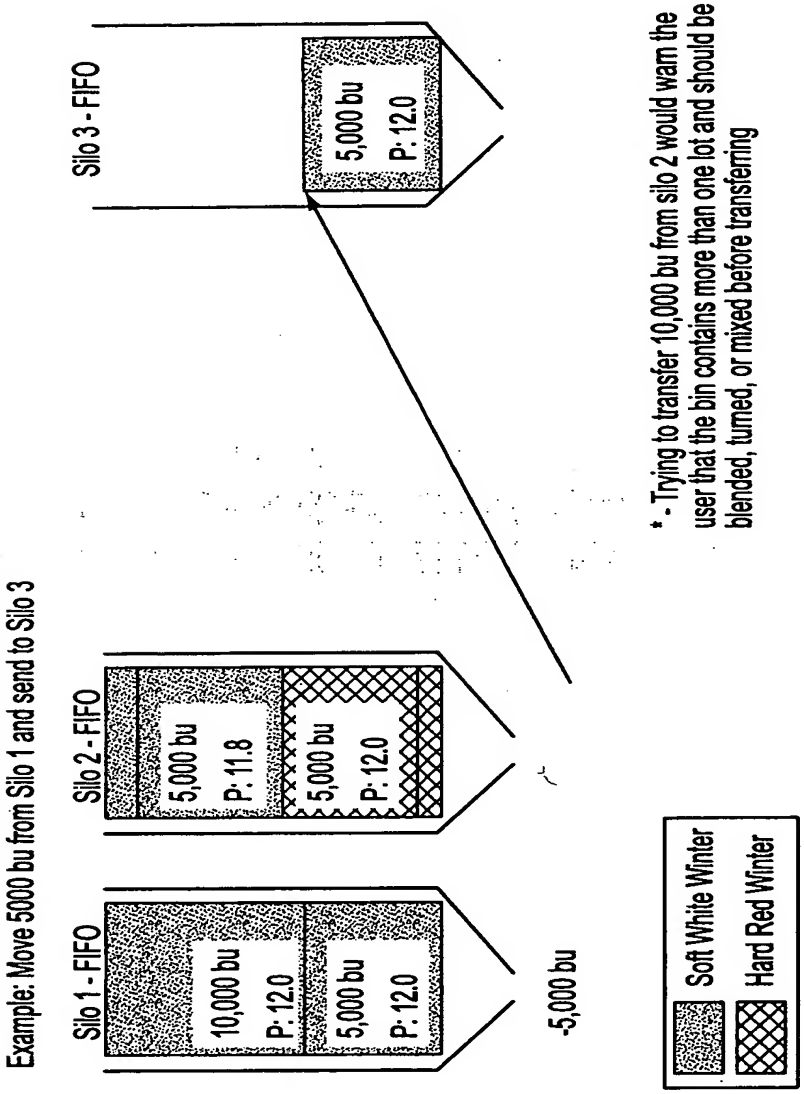
Example: Move 5000 bu from Silo 1 and send to Silo 3
Silo 1 - FIFO
10,000 bu
P: 12.0
5,000 bu
P: 12.0
Silo 2 - FIFO
5,000 bu
P: 11.8
5,000 bu
P: 12.0
Silo 3 - FIFO
5,000 bu
P: 12.0
-5,000 bu
*- Trying to transfer 10,000 bu from silo 2 would warn the user that the bin contains more than one lot and should be blended, turned, or mixed before transferring
Soft White Winter
Hard Red Winter

FIG. 22

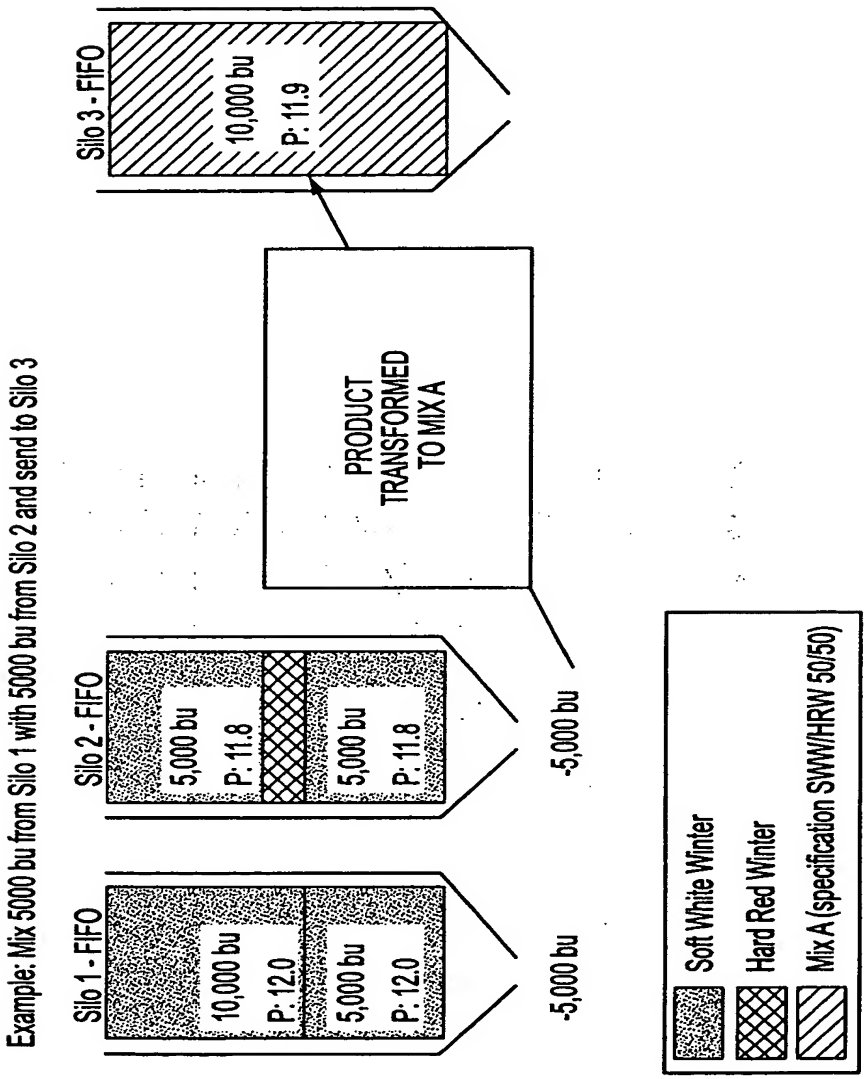
Example: Mix 5000 bu from Silo 1 with 5000 bu from Silo 2 and send to Silo 3
Silo 1 - FIFO
10,000 bu
P: 12.0
5,000 bu
P: 12.0
Silo 2 - FIFO
5,000 bu
P: 11.8
5,000 bu
P: 11.8
Silo 3 - FIFO
10,000 bu
P: 11.9
-5,000 bu
-5,000 bu
PRODUCT
TRANSFORMED
TO MIX A
Soft White Winter
Hard Red Winter
Mix A (specification SWW/HRW 50/50)

FIG. 23

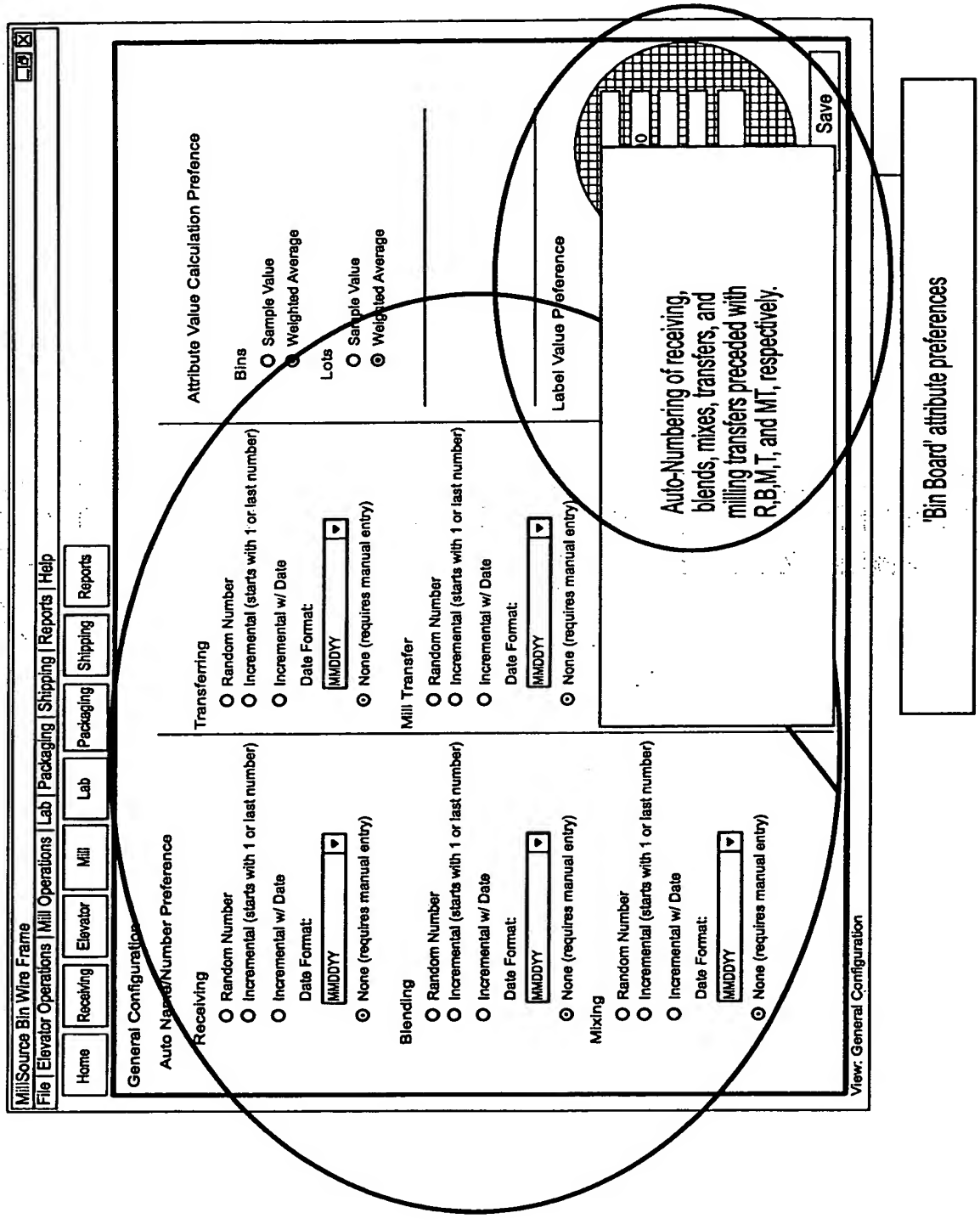
MillSource Bin Wire Frame
File | Elevator Operations | Mill Operations | Lab | Packaging | Shipping | Reports | Help
Home
Receiving
Elevator
Mill
Lab
Packaging
Shipping
Reports
General Configuration
Auto Name/Number Preference
Receiving
Random Number
Incremental (starts with 1 or last number)
Incremental w/ Date
Date Format:
MMDDYY
None (requires manual entry)
Blending
Random Number
Incremental (starts with 1 or last number)
Incremental w/ Date
Date Format:
MMDDYY
None (requires manual entry)
Mixing
Random Number
Incremental (starts with 1 or last number)
Incremental w/ Date
Date Format:
MMDDYY
None (requires manual entry)
Transferring
Random Number
Incremental (starts with 1 or last number)
Incremental w/ Date
Date Format:
MMDDYY
None (requires manual entry)
Mill Transfer
Random Number
Incremental (starts with 1 or last number)
Incremental w/ Date
Date Format:
MMDDYY
None (requires manual entry)
Attribute Value Calculation Prefence
Bins
Sample Value
Weighted Average
Lots
Sample Value
Weighted Average
Label Value Preference
Auto-Numbering of receiving, blends, mixes, transfers, and milling transfers preceded with R,B,M,T, and MT, respectively.
Save
View: General Configuration
'Bin Board' attribute preferences

FIG. 24

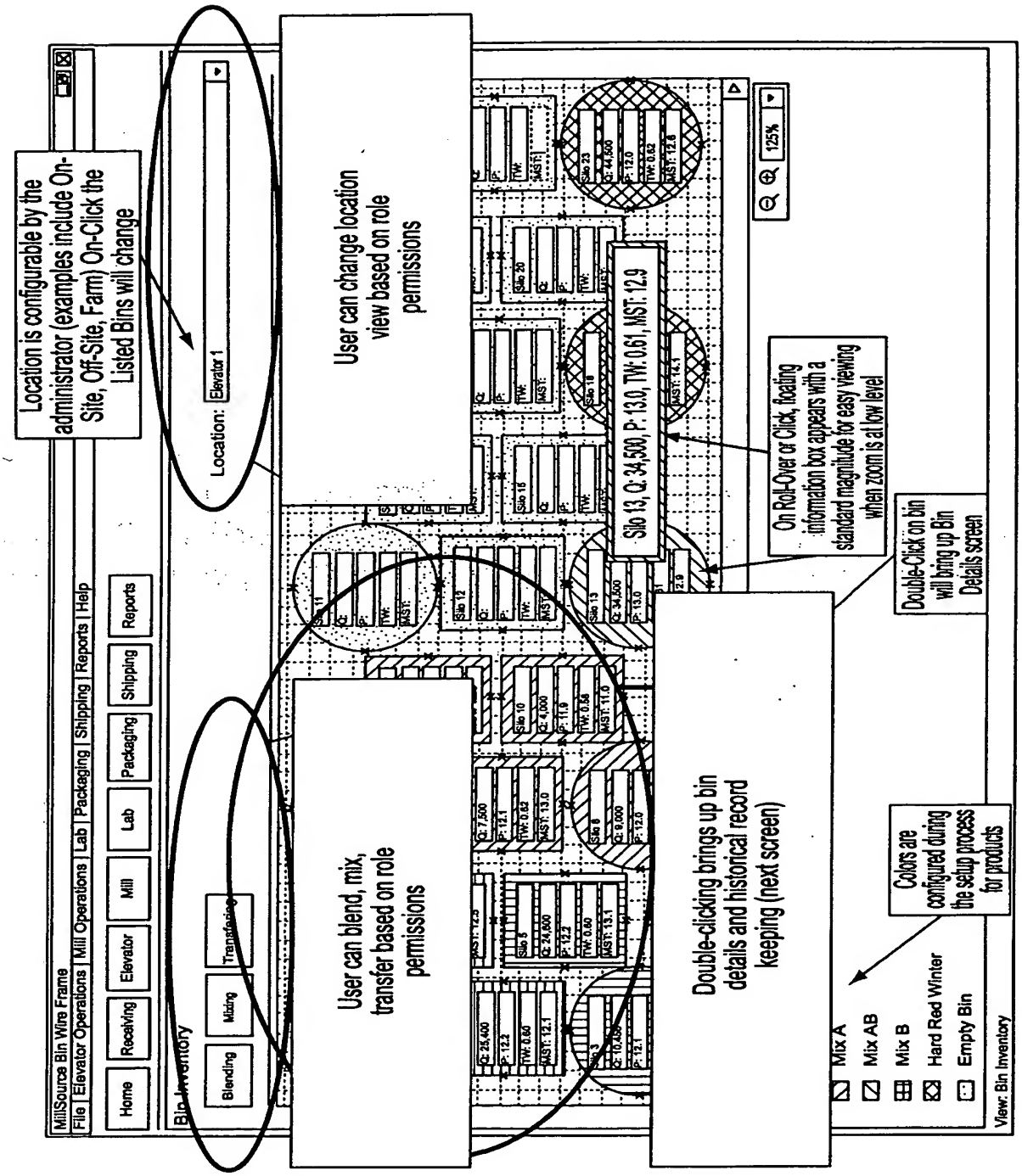
Location is configurable by the administrator (examples include On-Site, Off-Site, Farm) On-Click the Listed Bins will change
Location: Elevator 1
User can change location view based on role permissions
On Roll-Over or Click, floating information box appears with a standard magnitude for easy viewing when zoom is at low level
Silo 13, Q: 34,500, P: 13.0, TW: 0.61, MST: 12.9
Double-Click on bin will bring up Bin Details screen
User can blend, mix, transfer based on role permissions
Double-clicking brings up bin details and historical record keeping (next screen)
Colors are configured during the setup process for products
MillSource Bin Wire Frame
File | Elevator Operations | Mill Operations | Lab | Packaging | Shipping | Reports | Help
Home
Receiving
Elevator
Mill
Lab
Packaging
Shipping
Reports
Bin Inventory
Blending
Mixing
Transfer
125%
Mix A
Mix AB
Mix B
Hard Red Winter
Empty Bin
View: Bin Inventory

FIG. 25

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 A /deb, mah

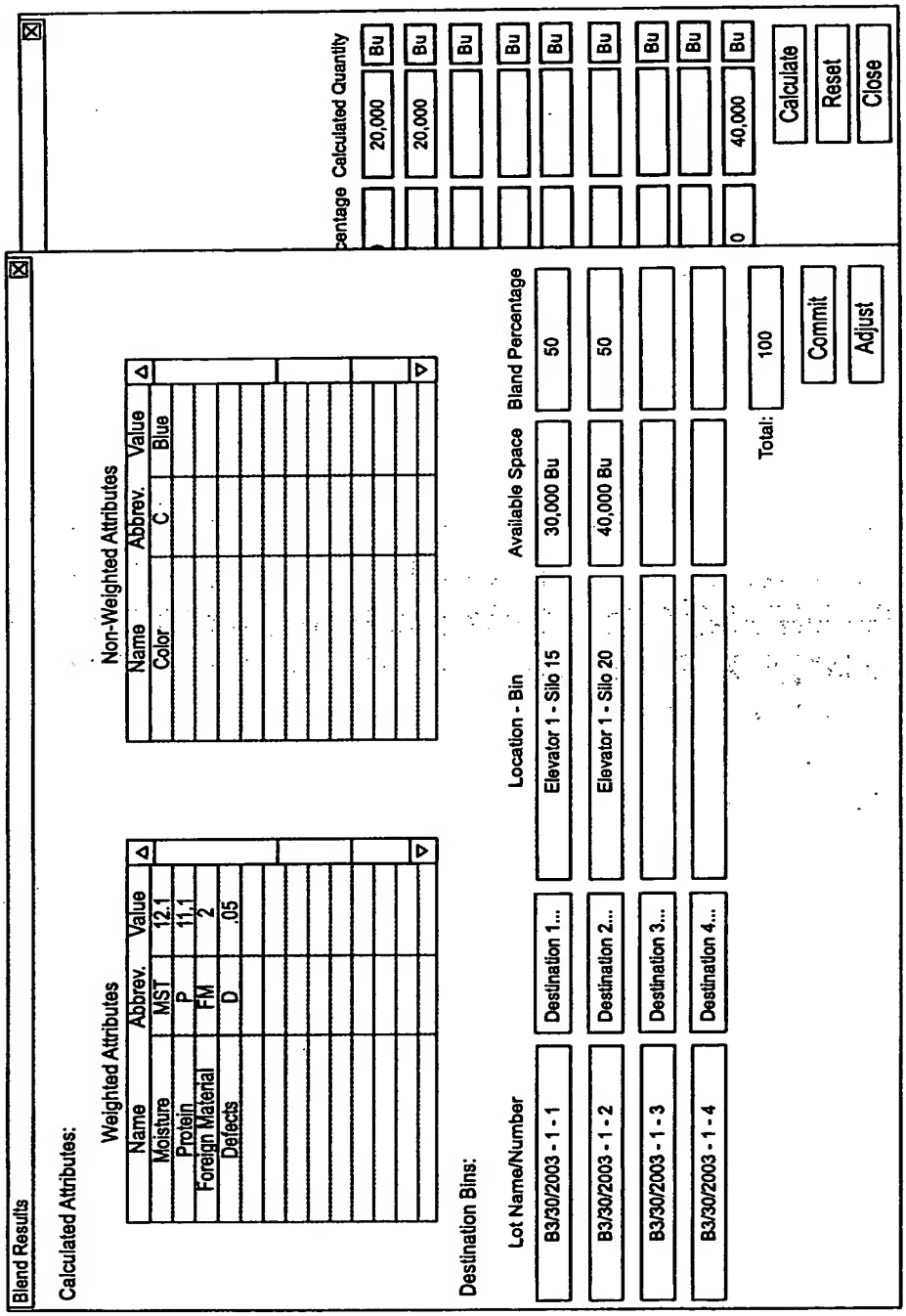

FIG. 26

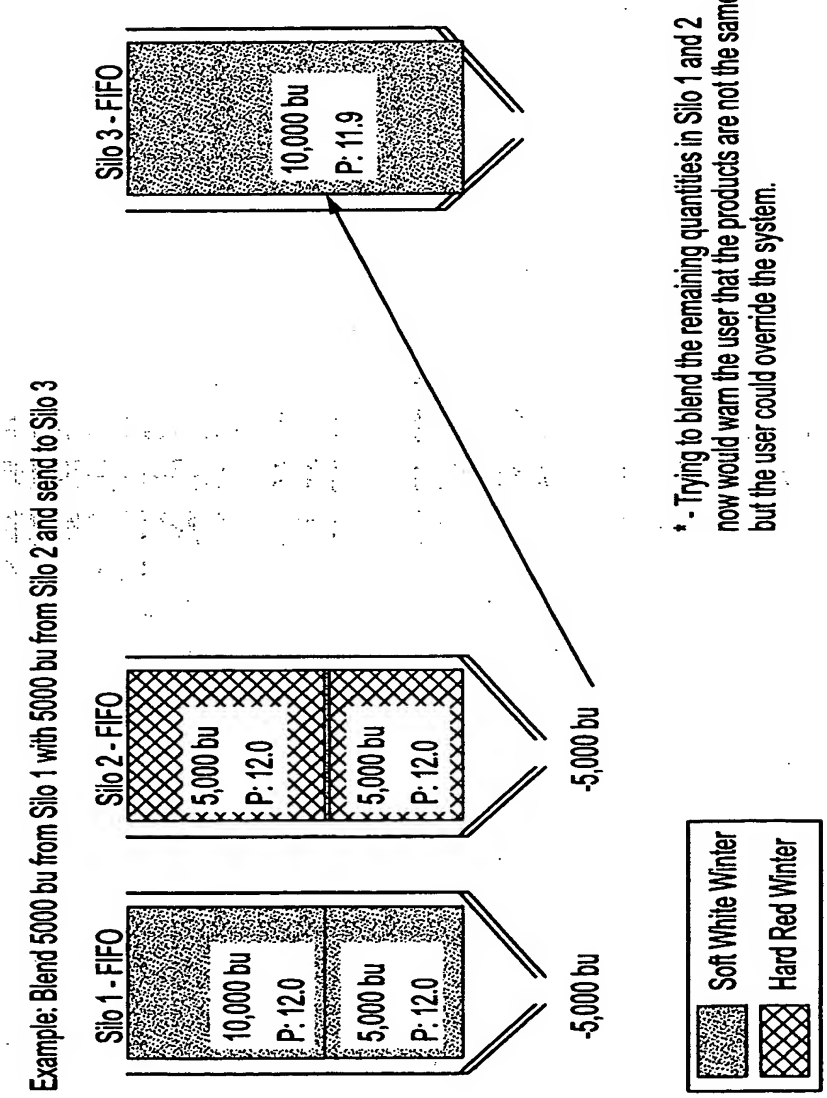
Example: Blend 5000 bu from Silo 1 with 5000 bu from Silo 2 and send to Silo 3
Silo 1 - FIFO
10,000 bu
P: 12.0
5,000 bu
P: 12.0
Silo 2 - FIFO
5,000 bu
P: 12.0
5,000 bu
P: 12.0
Silo 3 - FIFO
10,000 bu
P: 11.9
-5,000 bu
-5,000 bu
Soft White Winter
Hard Red Winter
*- Trying to blend the remaining quantities in Silo 1 and 2 now would warn the user that the products are not the same, but the user could override the system.

FIG. 27

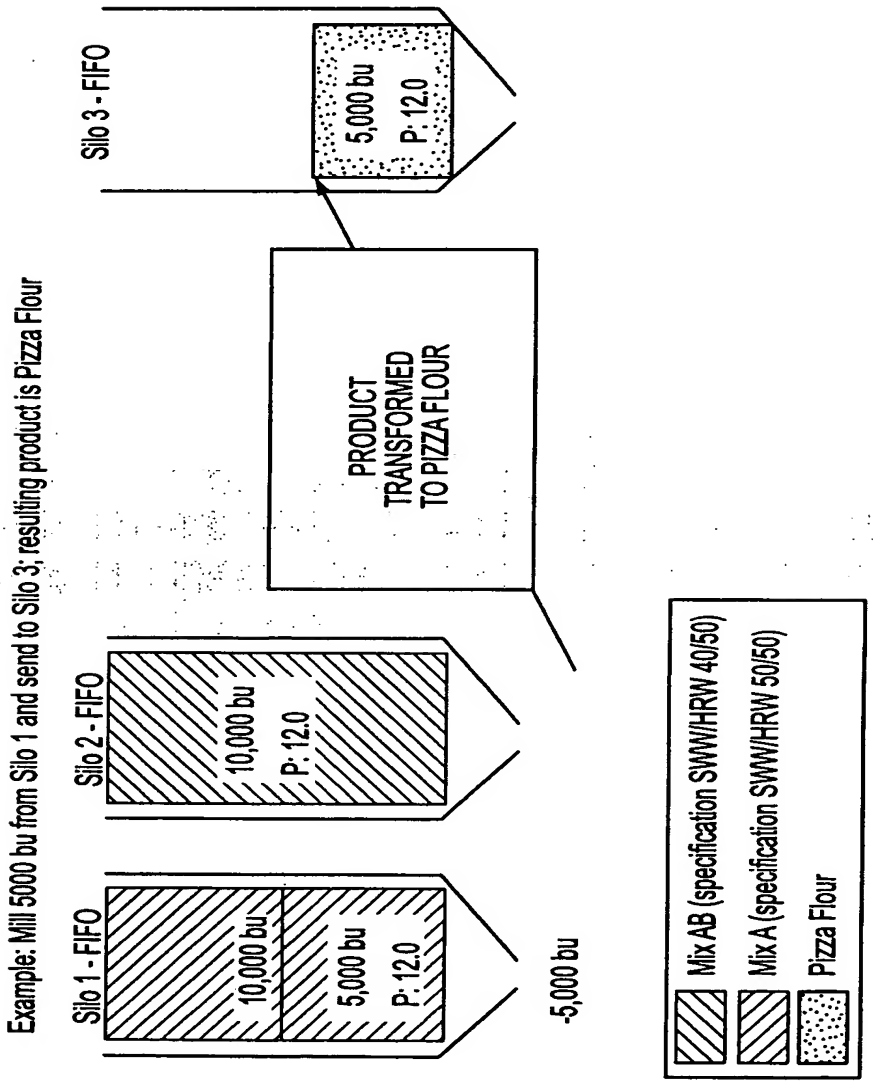
Example: Mill 5000 bu from Silo 1 and send to Silo 3; resulting product is Pizza Flour
Silo 1 - FIFO
10,000 bu
5,000 bu
P: 12.0
Silo 2 - FIFO
10,000 bu
P: 12.0
-5,000 bu
PRODUCT
TRANSFORMED
TO PIZZA FLOUR
Silo 3 - FIFO
5,000 bu
P: 12.0
Mix AB (specification SWW/HRW 40/50)
Mix A (specification SWW/HRW 50/50)
Pizza Flour

FIG. 28

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb. mah

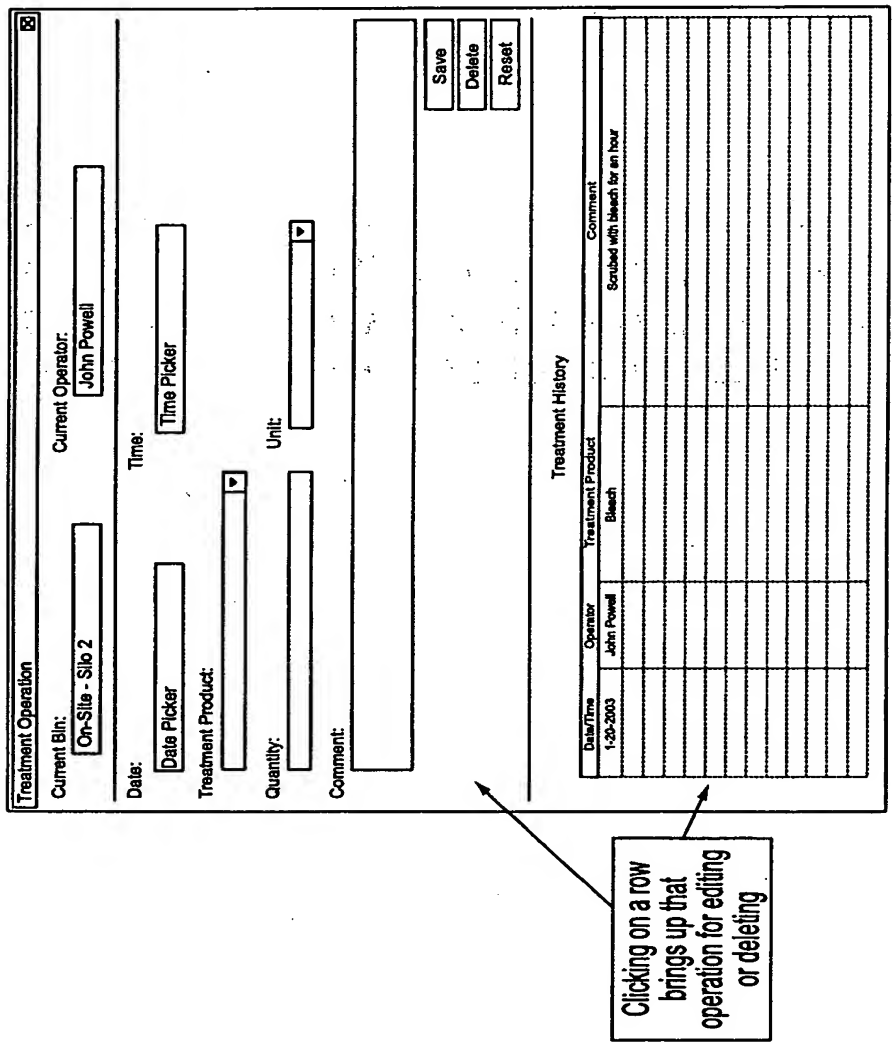

FIG. 29

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

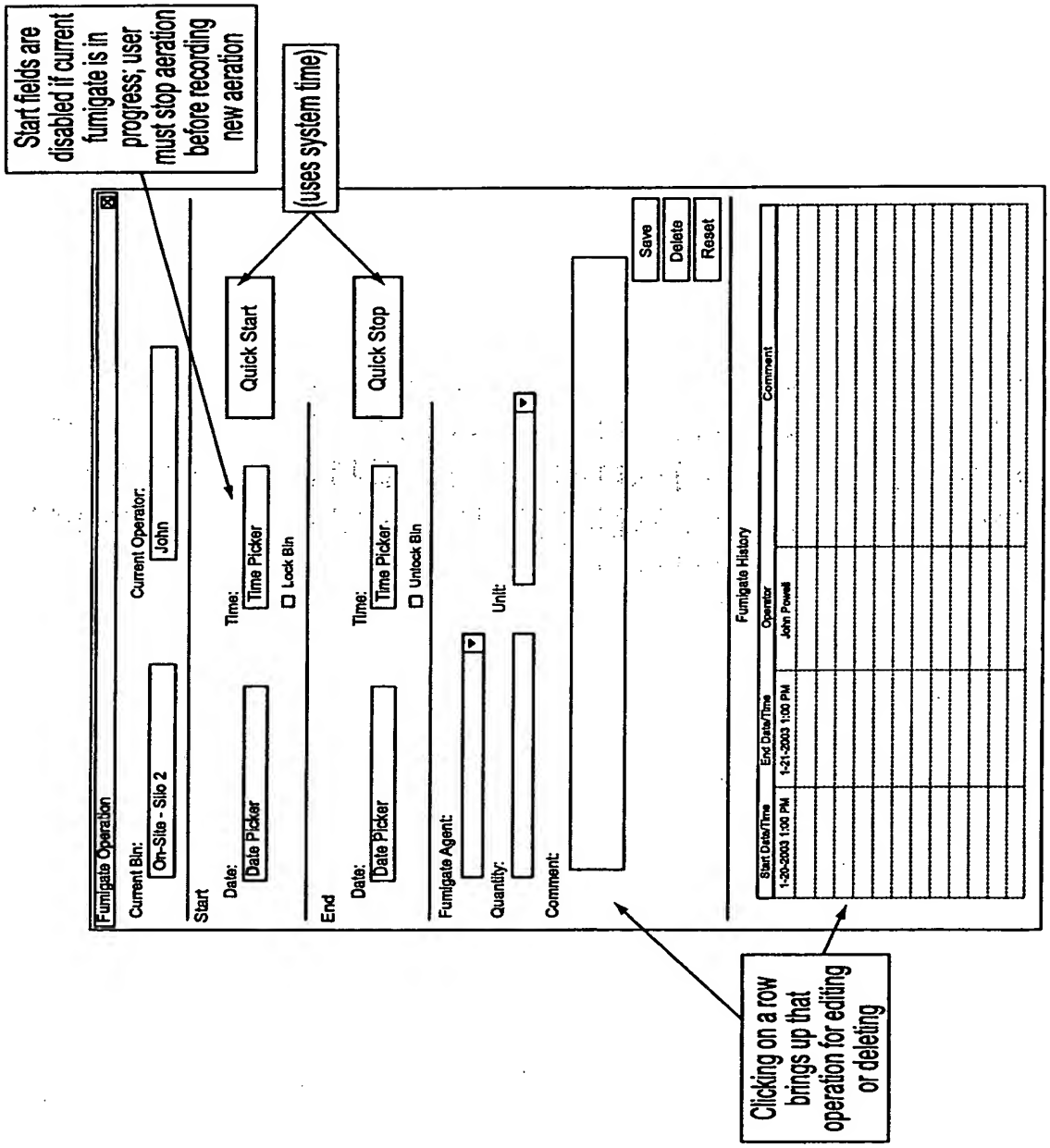

FIG. 30

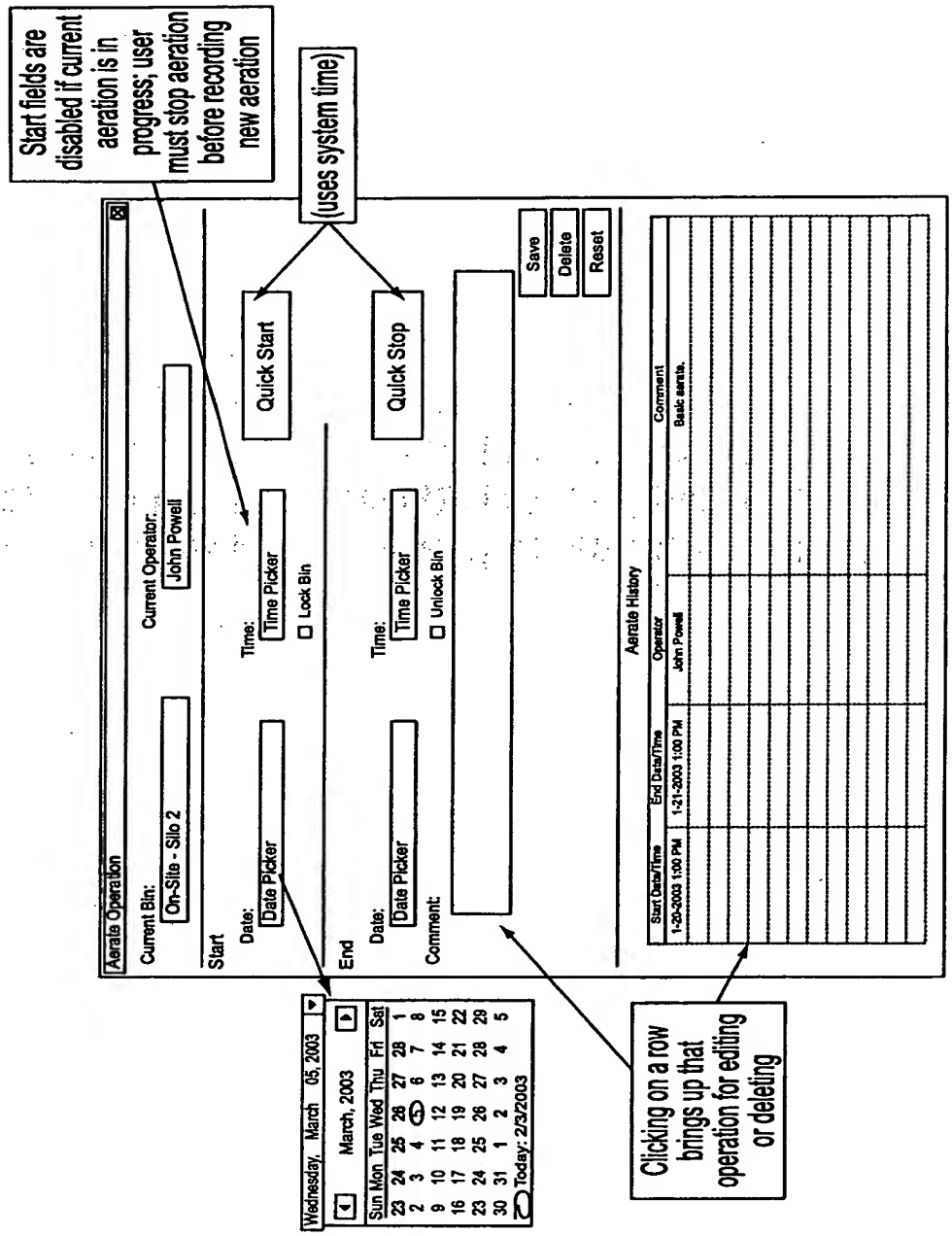
Start fields are disabled if current aeration is in progress; user must stop aeration before recording new aeration
(uses system time)
Aerate Operation
Current Bin:
On-Site - Silo 2
Current Operator:
John Powell
Start
Date:
Date Picker
Time:
Time Picker
Lock Bin
Quick Start
End
Date:
Date Picker
Time:
Time Picker
Unlock Bin
Quick Stop
Comment:
Save
Delete
Reset
Aerate History
Start Date/Time
End Date/Time
Operator
Comment
1-20-2003 1:00 PM
1-21-2003 1:00 PM
John Powell
Basic aerate.
Wednesday, March 05, 2003
March, 2003
Sun Mon Tue Wed Thu Fri Sat
Today: 2/3/2003
Clicking on a row brings up that operation for editing or deleting

FIG. 31

TITLE: METHOD AND SYSTEM FOR MANAGEMENT OF THE PROCESSING OF AGRICULTURAL PRODUCTS
INVENTOR: William Robert Pope, et. al.
DOCKET #: 16527 /deb, mah

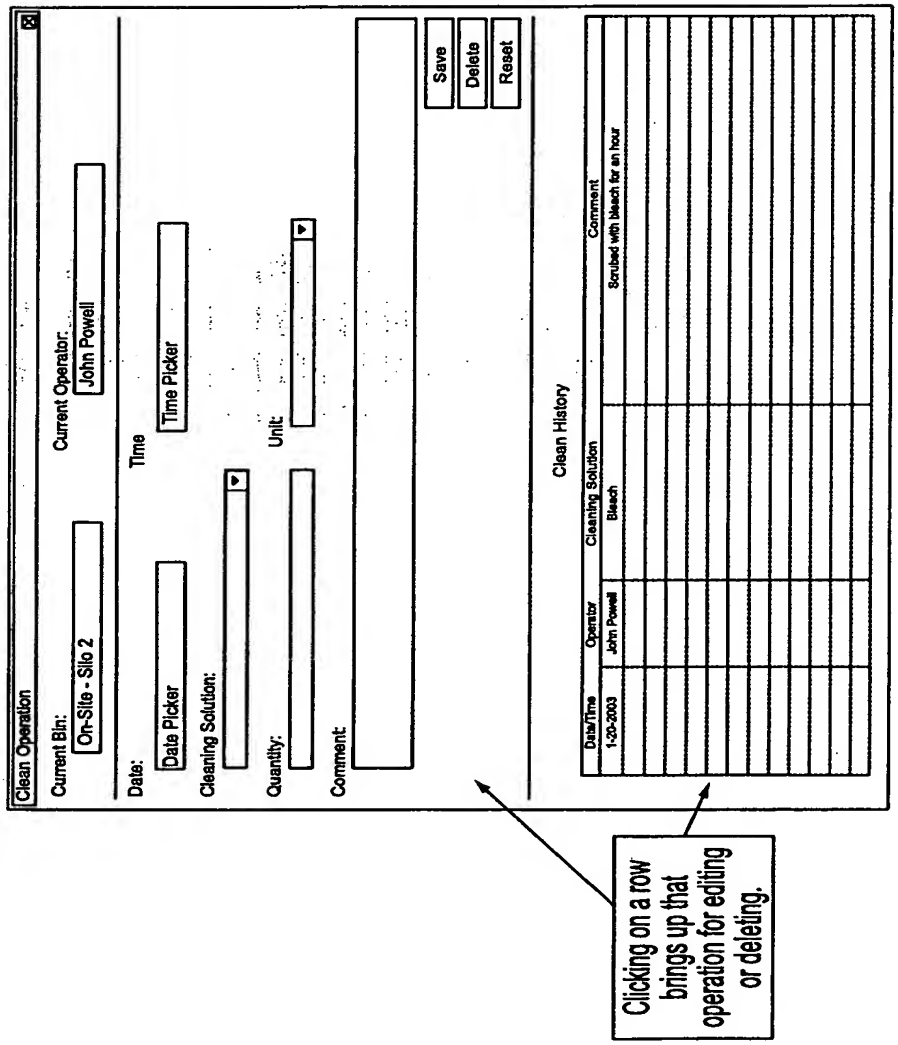

FIG. 32